



Glasgow Centre for Population Health

‘WELL-HEALTH 3.0’:

An exploration of synergistic thinking in public health, integrated healthcare, healthy cities

23-01-13



Joe Ravetz

Centre for Urban & Regional Ecology
University of Manchester

www.manchester.ac.uk/cure

Contents

- Introduction
- a) Scoping / mapping
- b) Scenario / testing
- c) Synergy / opportunity
- d) Strategy / roadmap
- What next ?

- *Visuals*
- *Process*
- *Technologies*
- *Questions*

WHO IS HERE?

- Public health
- Users-clients
- Doctors
- Nurses / auxiliaries
- NHS managers
- Other public sector
- Other private sector
- Other NGO sector
- Research
- Other??



Prologue A



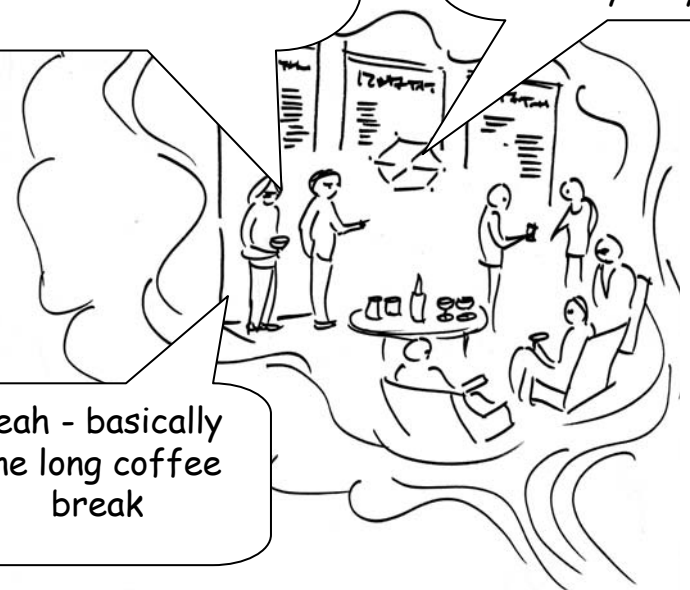
I've heard he's generally late...

And is this it - pencil & rubber!! how low-tech can you get??

That's deliberate, he says he doesn't want any fancy photoshop stuff taking over

I bet it's all he knows how to do. Anyway what are we doing here?

The illustration shows a man standing on a giant pencil that is part of a larger pencil-shaped structure. A woman is sitting on the pencil, looking at a laptop. A pencil sharpener is also visible on the pencil. The scene is set against a background of a large pencil and eraser.



we're the ones at the back of the author's brain, kind of semi-fictional... we do the human side - conversations, stories - he says it's just as important as technical detail

And we're supposed to try & work out what he's saying? And then explain it to everybody else?

Yeah - basically one long coffee break

The illustration depicts a coffee shop scene with several people sitting at tables and talking. A large speech bubble is superimposed over the scene, containing the text.

Prologue A

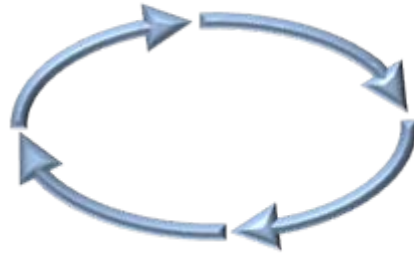


Process – ‘Synergy Foresight’

A) SCOPING :

Discussion with multiple views & values

What are the issues? Who is involved? Who agrees or



B) SCENARIO :

Divergence – futures, possibilities, risks

What if things change? What if the best / worst happens?



4) STRATEGY :

Convergence: responses, strategy, policies & projects

What actions are needed to achieve the goals? Who



C) SYNERGY : Emergence

- creative ideas, links & collaborations

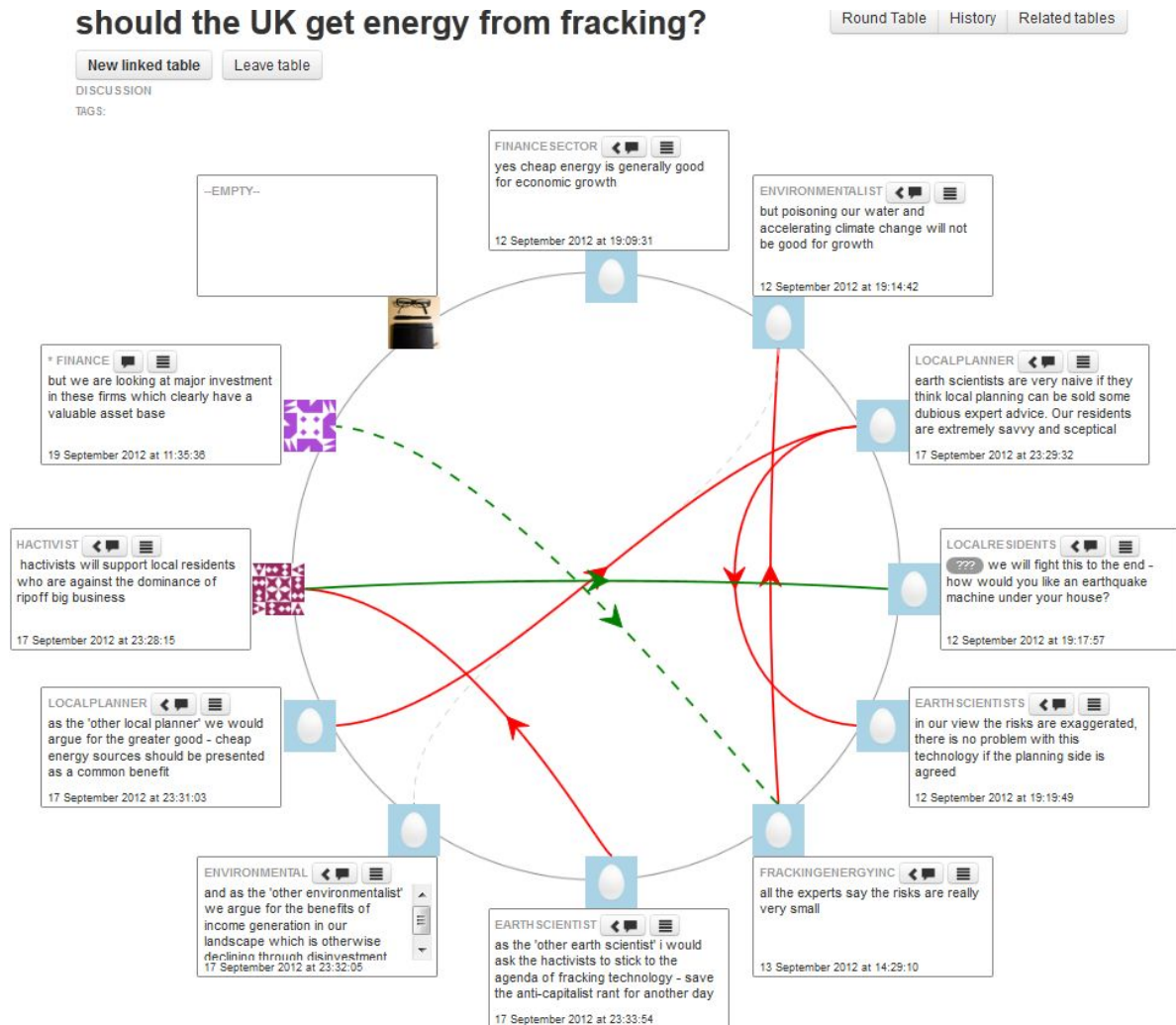
Which new things can emerge?

Where are synergies & opportunities?

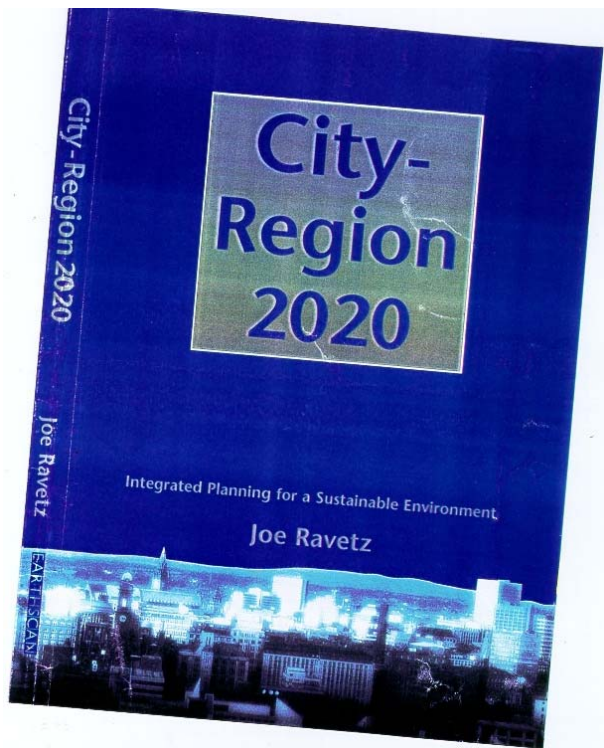
Social technology – Synergy Forum

prototype in progress - www.synergy-demo.hedtek.com

- The Synergy Forum creates a round table in virtual space
- Advantages - tracks agreements & synergies: inclusive of quieter voices: link to media: users can join anytime, any place
- up to 12 people is a practical limit for display of comments from each participant.
- analyses & reports on who agrees / disagrees with whom: or who is in 'synergy', on what kind of issues.
- Concept based on 'synergistics' and the "3.0" models



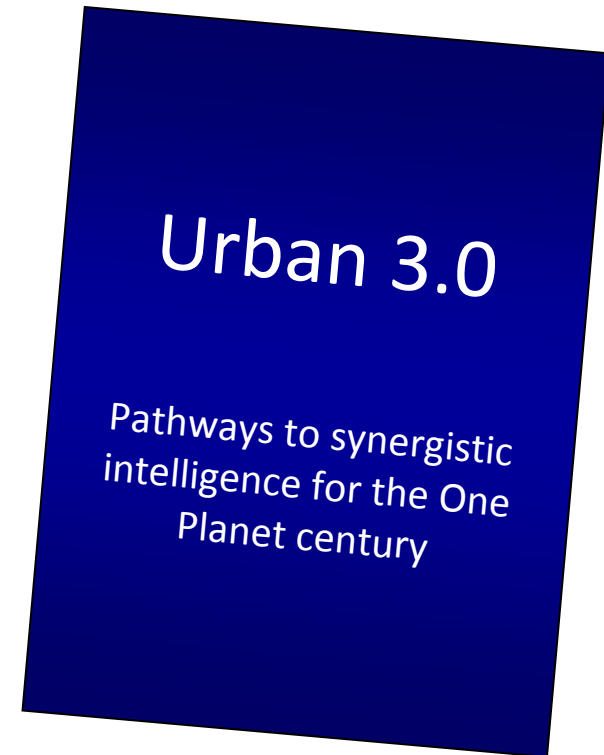
Background



“World’s largest feasibility study” – linking spatial, economy, environment, society, governance.



“Environment and the City” - critical perspectives on the urban environment around the world



“World’s largest organization strategy” – shared intelligence for the relational economy

- Introduction

a) SCOPING / MAPPING

b) Scenario / testing

c) Synergy / opportunity

d) Strategy / roadmap

- What next ?



Context – healthcare

(The Kings Fund 2012)

- Evidence that the current health and social care delivery system is broken -
 - Variations in health outcomes between social groups persist, in some cases widening (Marmot 2010).
 - In lowest performing practices only 25% of patients report being able to see their preferred doctor, and 11 % report they have been told they have a care plan (The King's Fund 2011).
 - Three-quarters of people with depression and anxiety receive no treatment, and the extra physical health care caused by mental illness costs the NHS at least £10 billion each year (LSE 2012).
- In our view, the future health and social care delivery system needs to:
 - see patients and service users as part of the care team
 - focus on the development of effective health and social care teams in which staff work flexibly and full use is made of the range of skills available
 - provide care in the right place at the right time by reducing overreliance on hospitals and care homes
 - Use ICT to revolutionise patients' and users' experiences
 - harness the potential of new medical technologies more effectively
 - make intelligent use of data and information to empower patients and support professionals to deliver high-

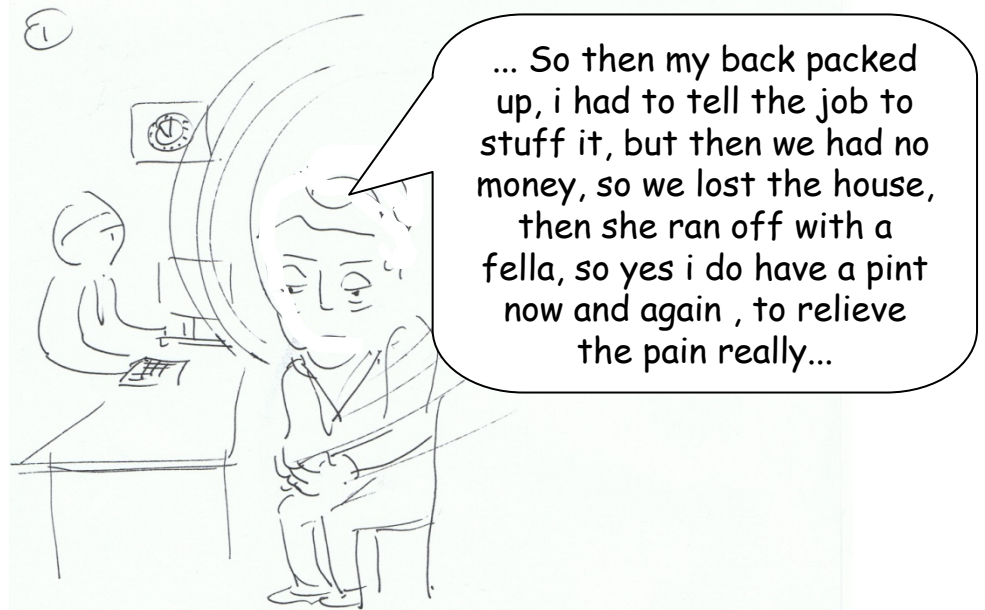
Context – wider trends

- Employment
- Food & diet
- Climate
- Environment
- Housing
- Culture
- Lifestyle
- Education
- Security

- Demographics
- Climate & ecology
- Food & water
- Urbanization & migration
- Fragmentation & alienation
- Pensions & inter-generational balance

Context

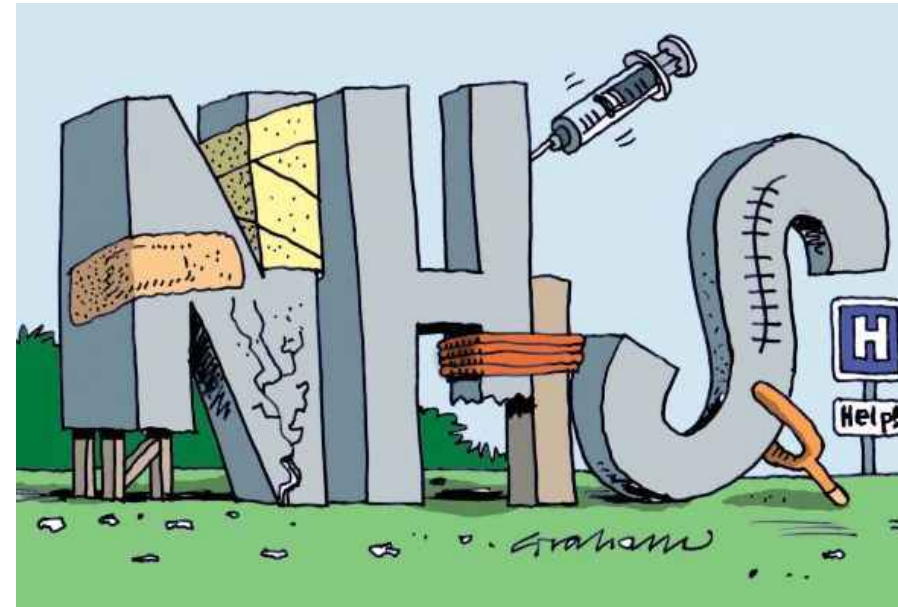
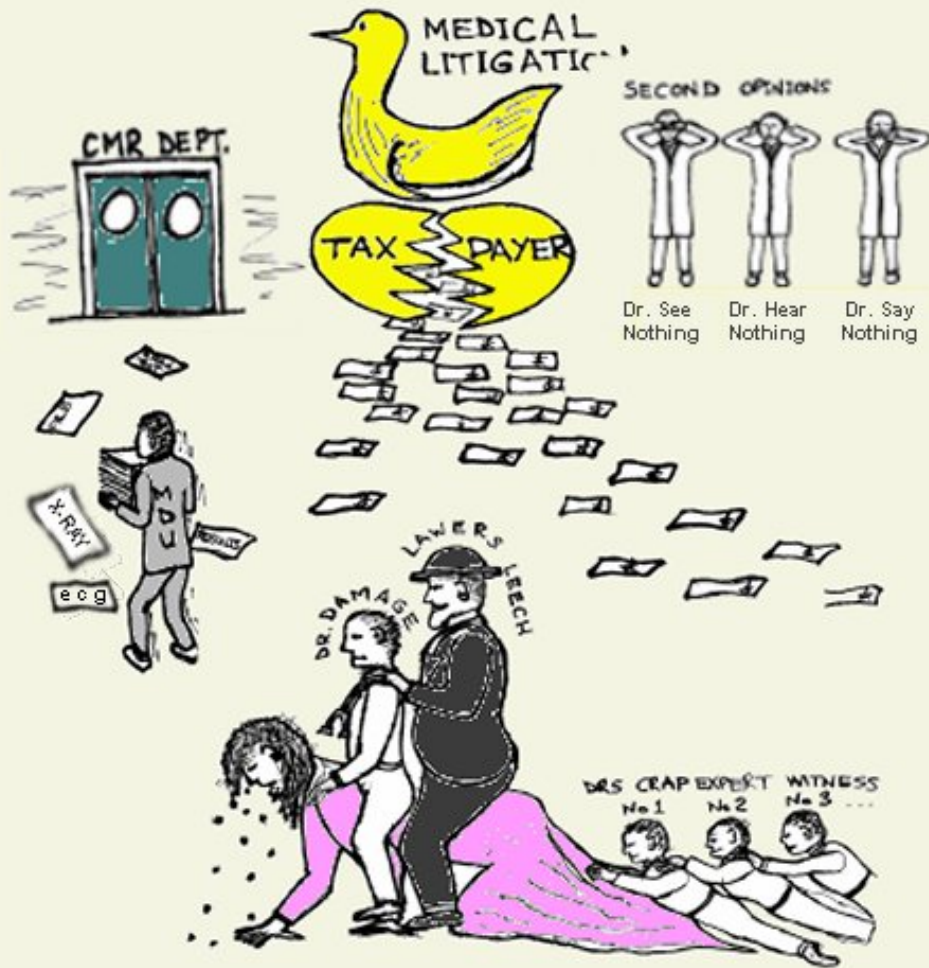
- My GP estimates 75% of her time is spent picking up the pieces left by other parts of a fragmented & failing society... in 10 minute slots:
- My colleague is a public health officer with the new CCG. She spends most of her time tendering for the work her team have already done for 15 years...



... So the doctor says, you can have these pills for now, but you gotta cut down, so i told him to stuff it, i'm not having any old busybody tell me how to run my life



THE IATROGENIC EXPERIENCE



Context

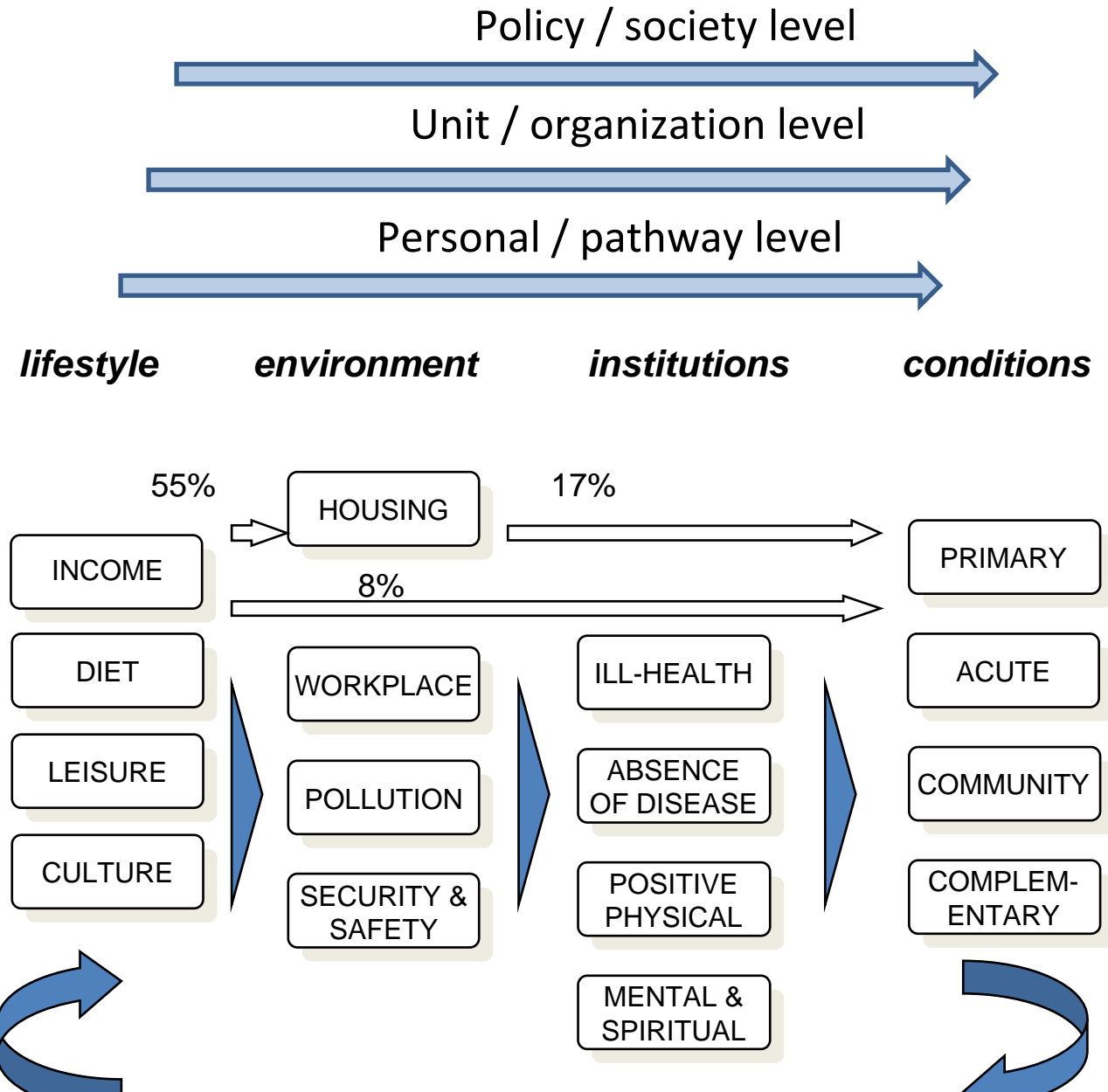


Public health metabolism

combined system activity generates a 'metabolism', i.e. Activity system of drivers, inputs, outputs, outcomes etc.

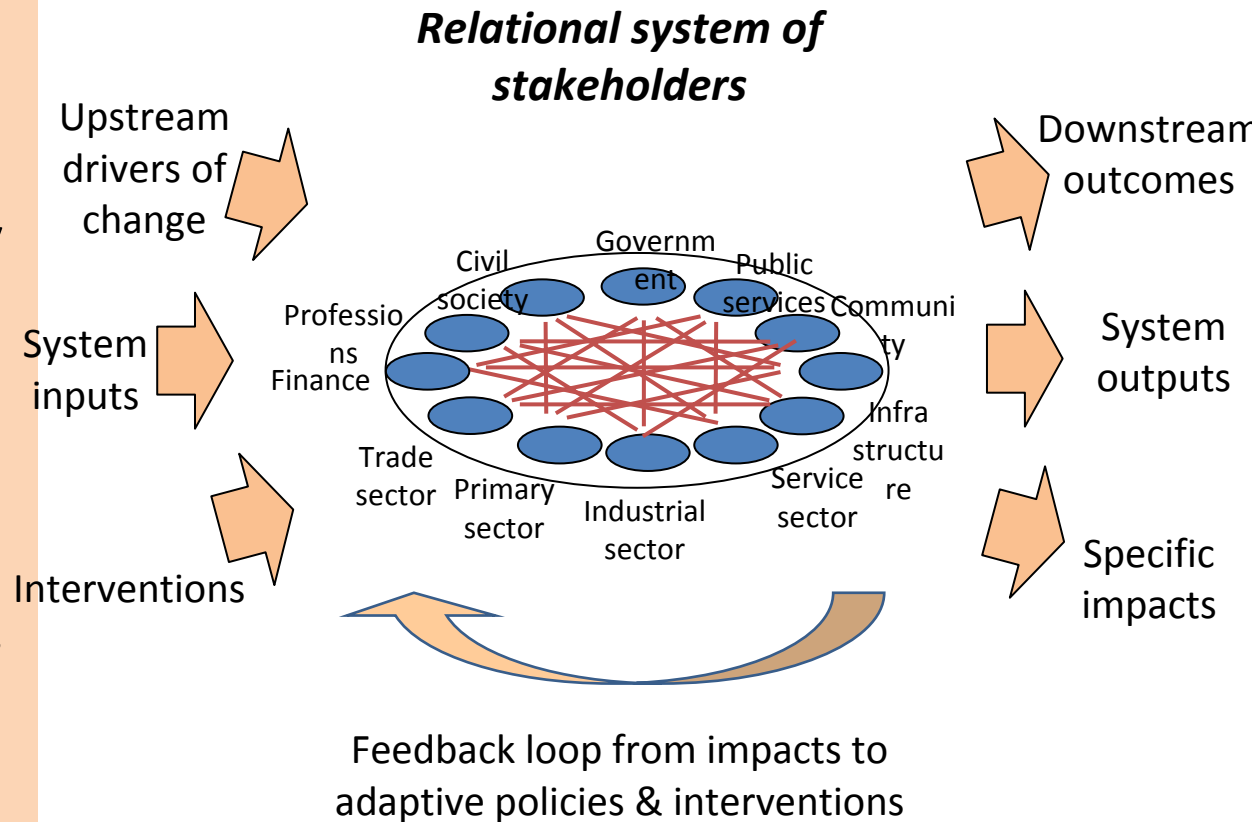
General linkages in WHO 'health fields', arranged in social metabolism framework. Percentages show example causal factors from NW Region.

Source: adapted from Byrne 1986:



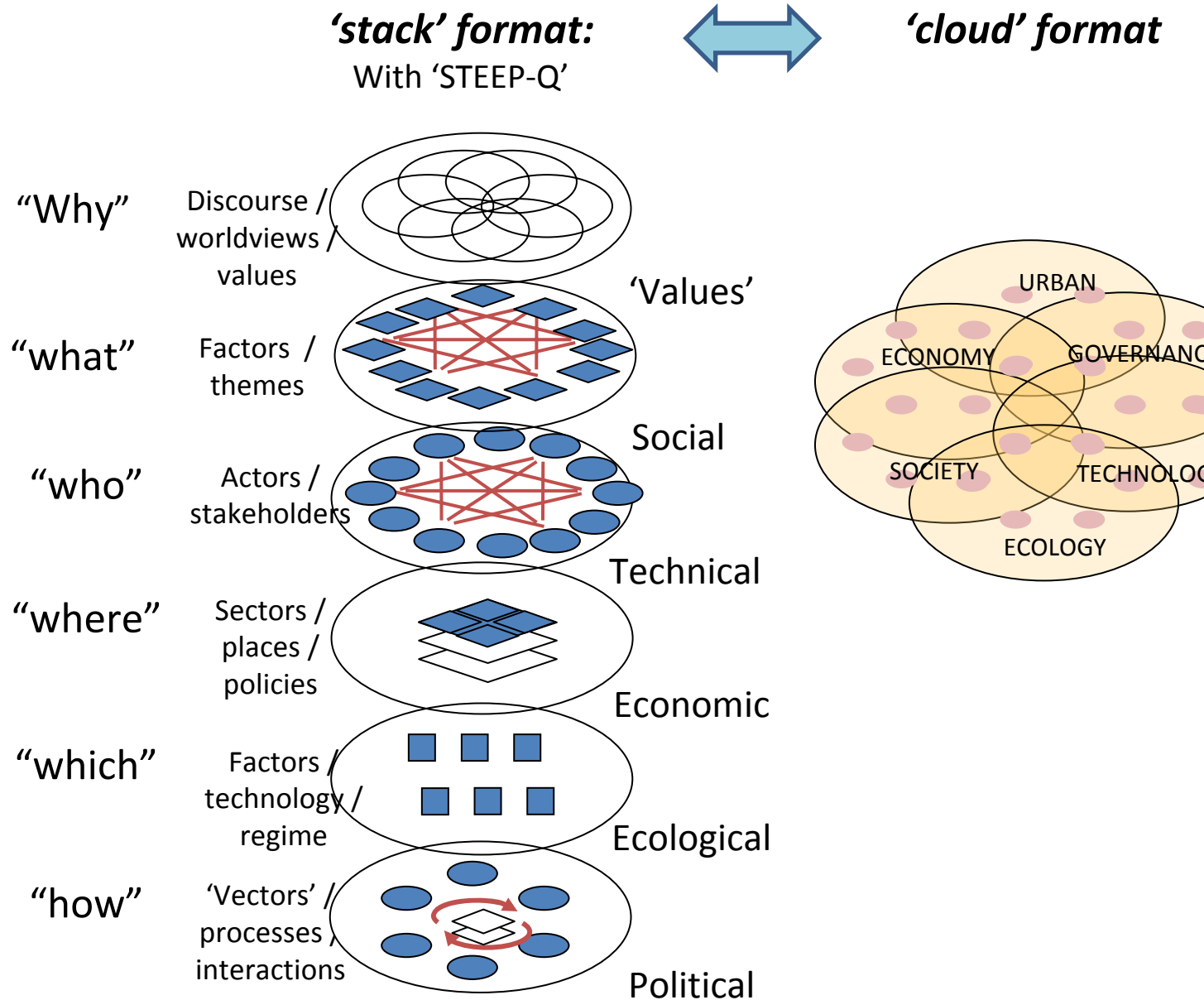
a) Relational system

- A 'relational system' includes components and relations
- In network analysis terms these are the 'nodes' & 'edges'.
- The combined system activity generates a 'metabolism', i.e. Activity system of drivers, inputs, outputs, outcomes etc.
- Shown here is a 'stakeholder' system... which can be visualized as people around a table, e.g. a board of directors of a firm
- (in reality, stakeholders are rarely equal)...



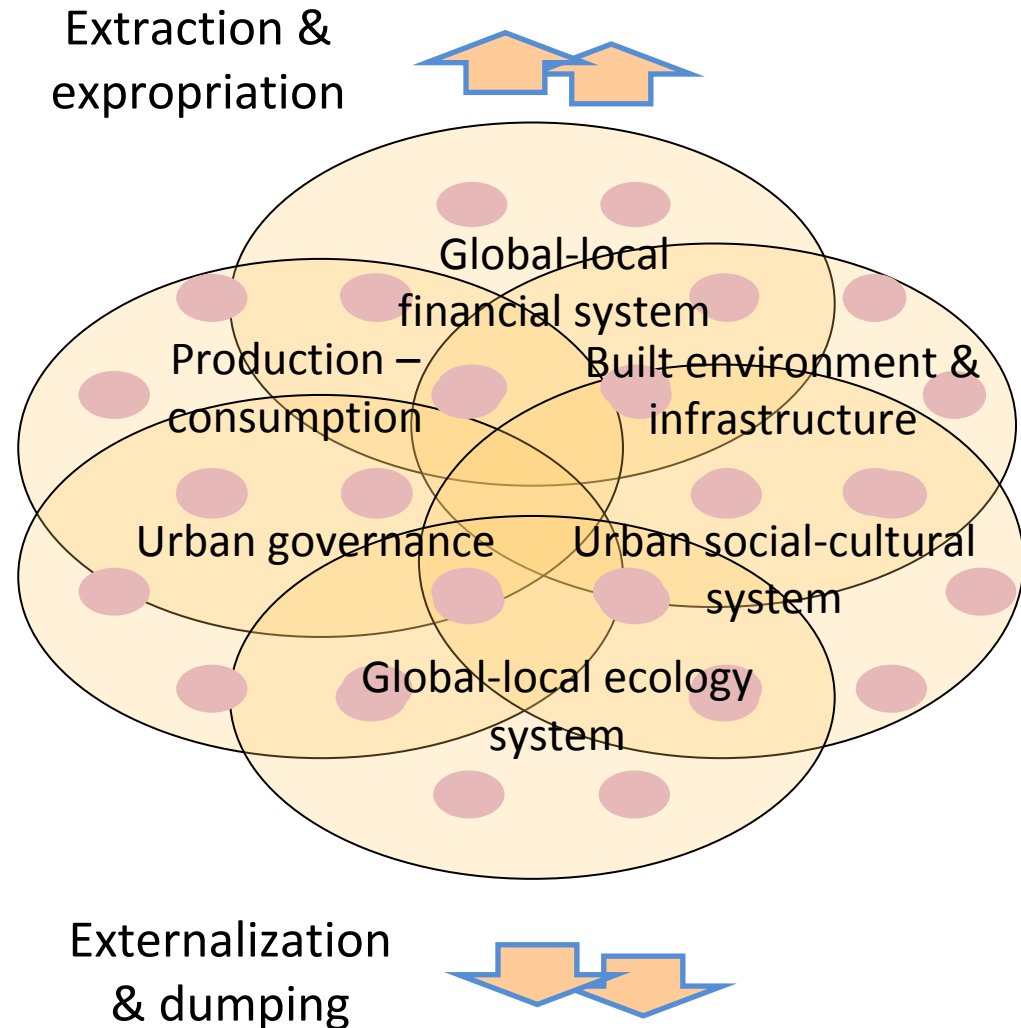
b) Multi-relational system

Then we can extend to look at other kinds of relationships - technical, economic, social, cultural, ecological etc. This can be visualized as a 3-d mapping



Multiple systems – landscape mapping

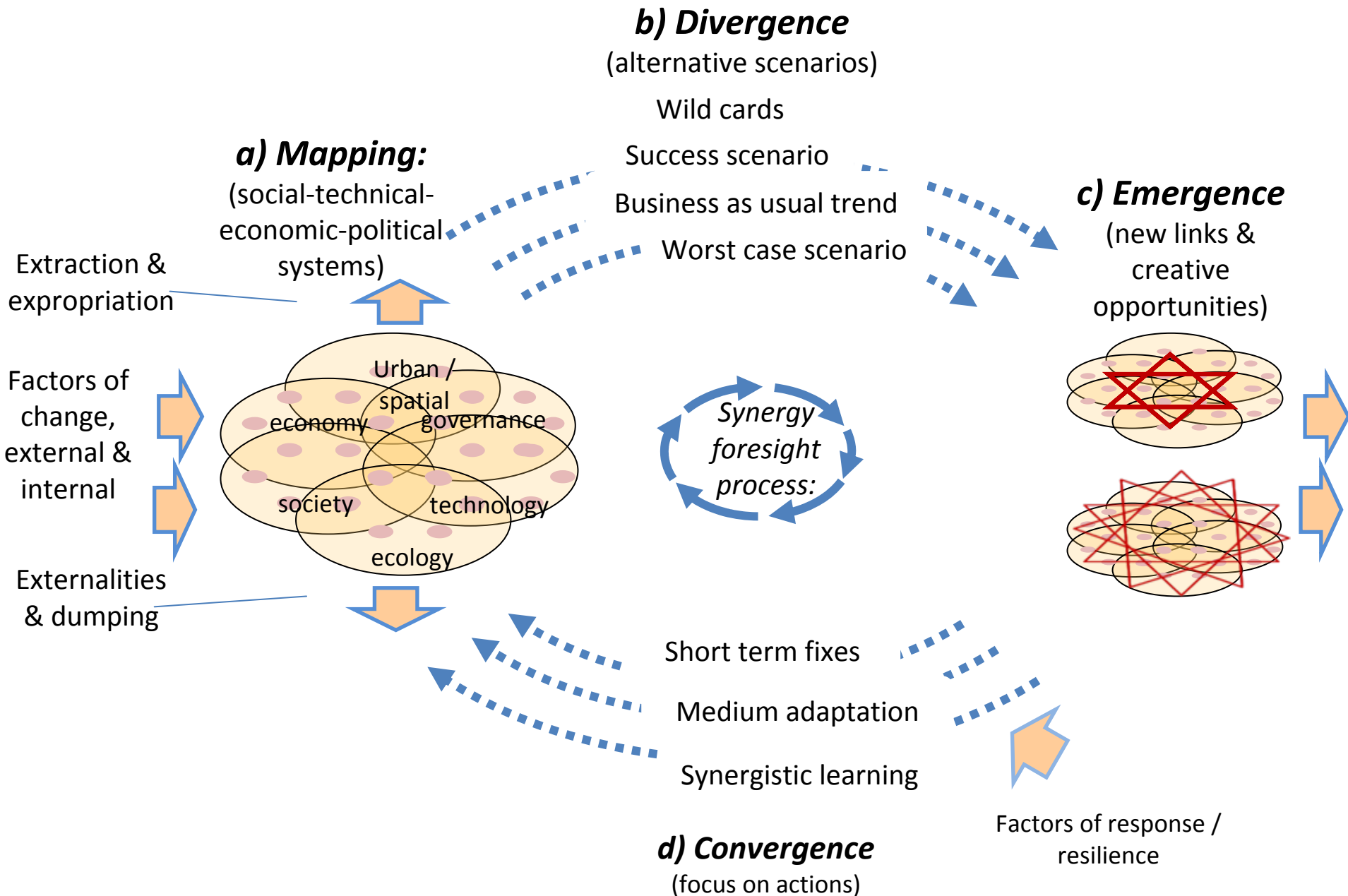
- many systems combine into an “urban” system.
- Each has different drivers, actors, factors, etc.
- Each can be supportive or destructive of other systems.
- Many inter-connections – also division & fragmentation
- sustainable development = different systems working together in **synergy**.
- E.g... social cohesion + inward investment + strong governance + ecological improvement =
- Needs creative action, strategic thinking, shared



Well-health mapping

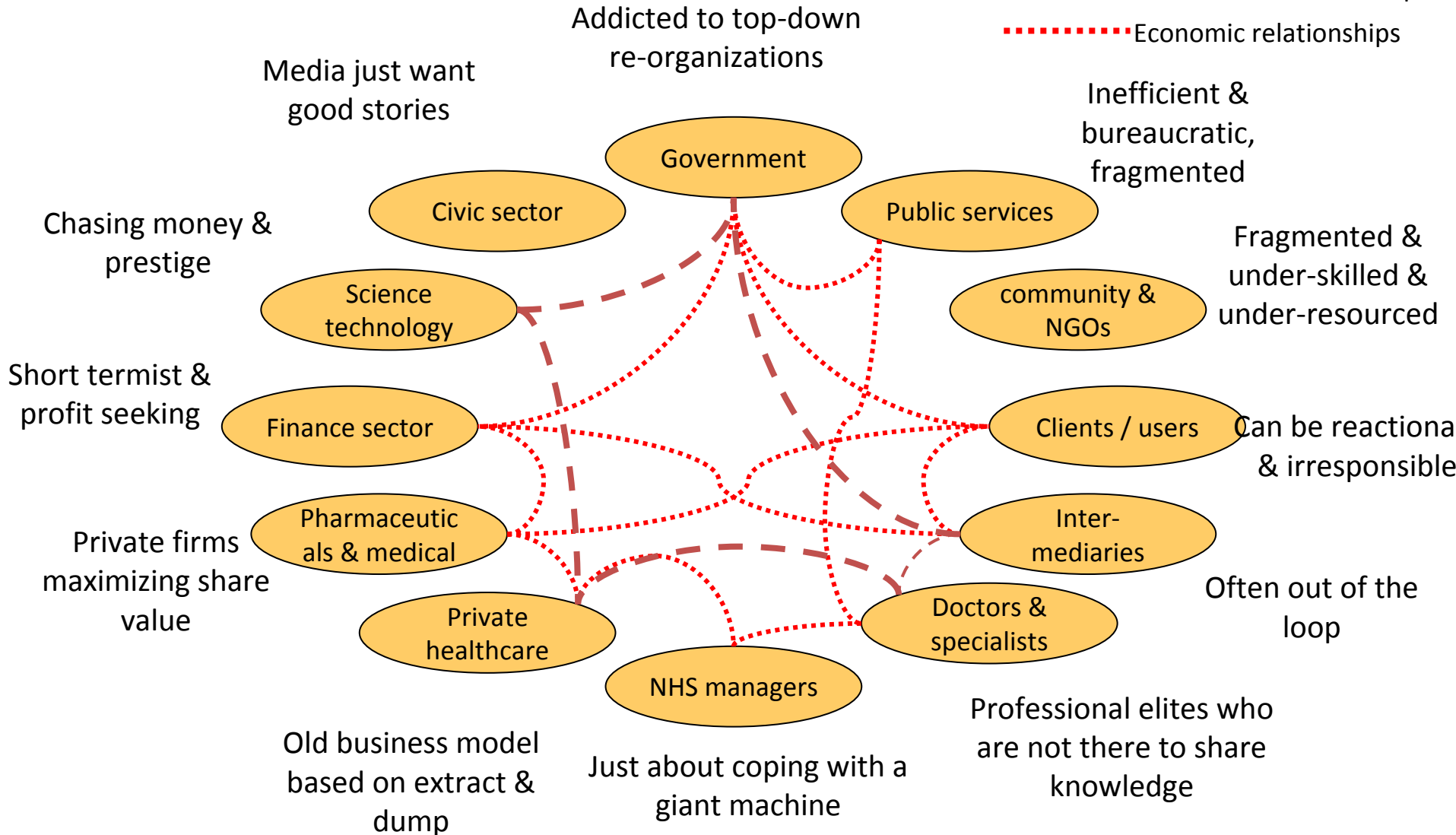
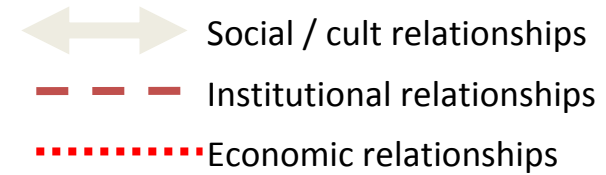
- Firstly there is a basic metabolism of healthcare – from background causal factors, a vulnerable person develops a condition, gets a diagnosis from the doctor, receives treatment, monitors the recovery, etc.
- Such a metabolism can be seen at other levels – the service or organization level: NHS or community level.
- But – we know that things aren't always a straight line. There is a community surrounding the patient / client: and a community of professionals who all need to interact and inter-connect.
- How do they do this? By learning & adapting continuously... Not only to technical problems , but where needed to multi-layer problems & opportunities

Synergistic mapping: well-health agenda



Example: healthy city stakeholder mapping

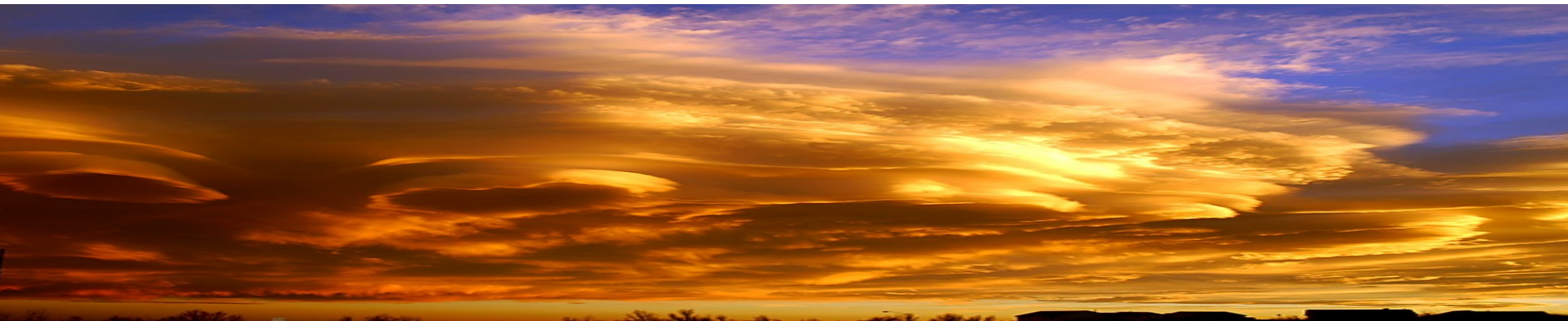
From: Integrated Visions project 2001: (links for illustration only)



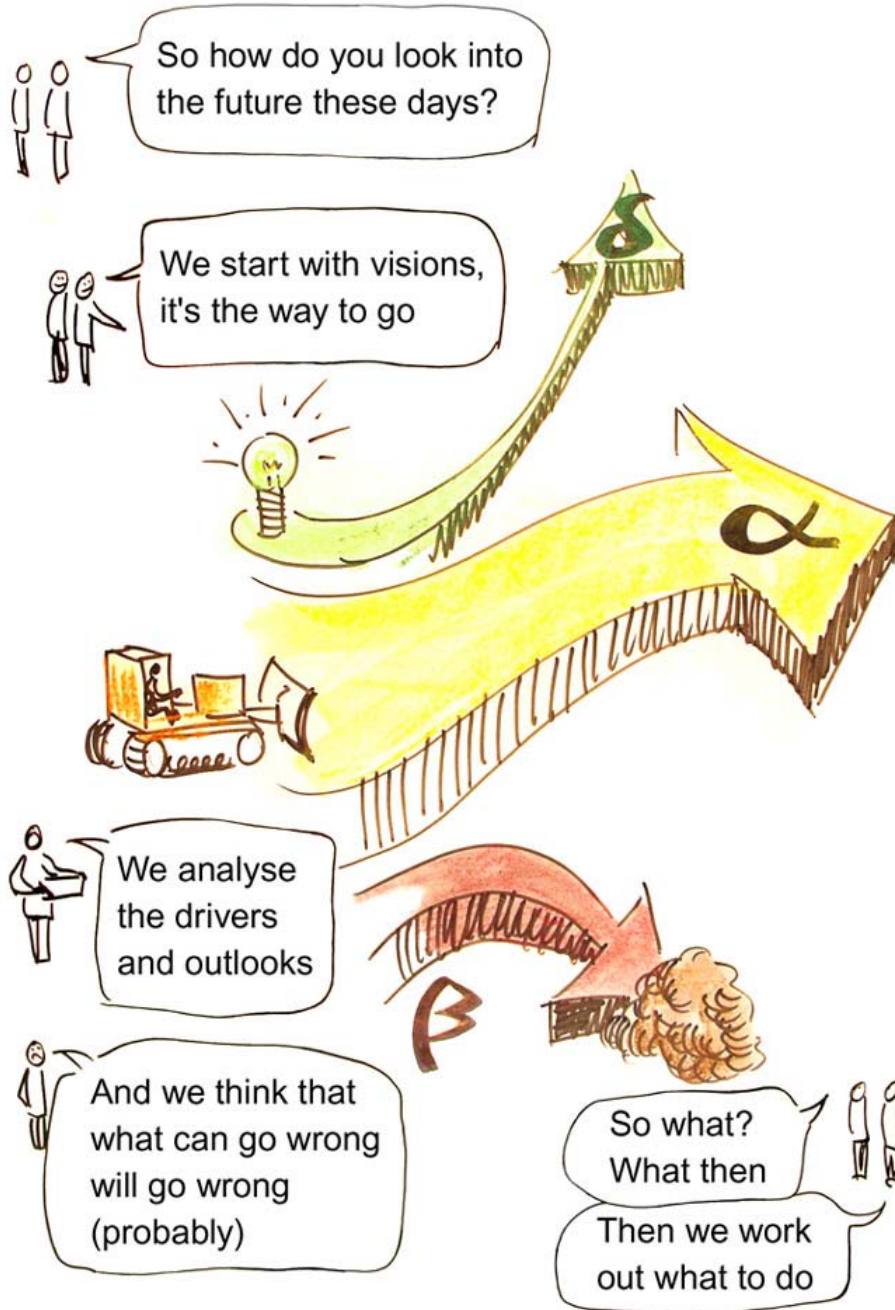
Questions (a) – scoping...

- *What are 3 key relationships / interactions / inter-connections, with others in your work?*
- *Which are 3 key relationships with other domains?*
- *Also (if we have time...)
– a question of ‘values’*

- Introduction
- a) Scoping / mapping
- b) SCENARIO / TESTING**
- c) Synergy / opportunity
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SCENARIO WORK



Trends & dynamics of change

- lifestyle conditions and addictions:
- financial pressure on healthcare:
- ageing population with rising expectations: fragmentation of public services:
- new technologies and treatments with rising costs:
- new ethical dilemmas on genetics,
- environmental risk, lifestyle risk, etc, etc.

- Also a more fundamental view of tensions and challenges.....
- growing difference between 'linear' healthcare as above, and more 'relational' or 'holistic' healthcare.
- There are widening gaps between the syndromes of the poor and the rich – more than 'inequality' this is living in separate societies
- We need scenarios for alternative futures ..

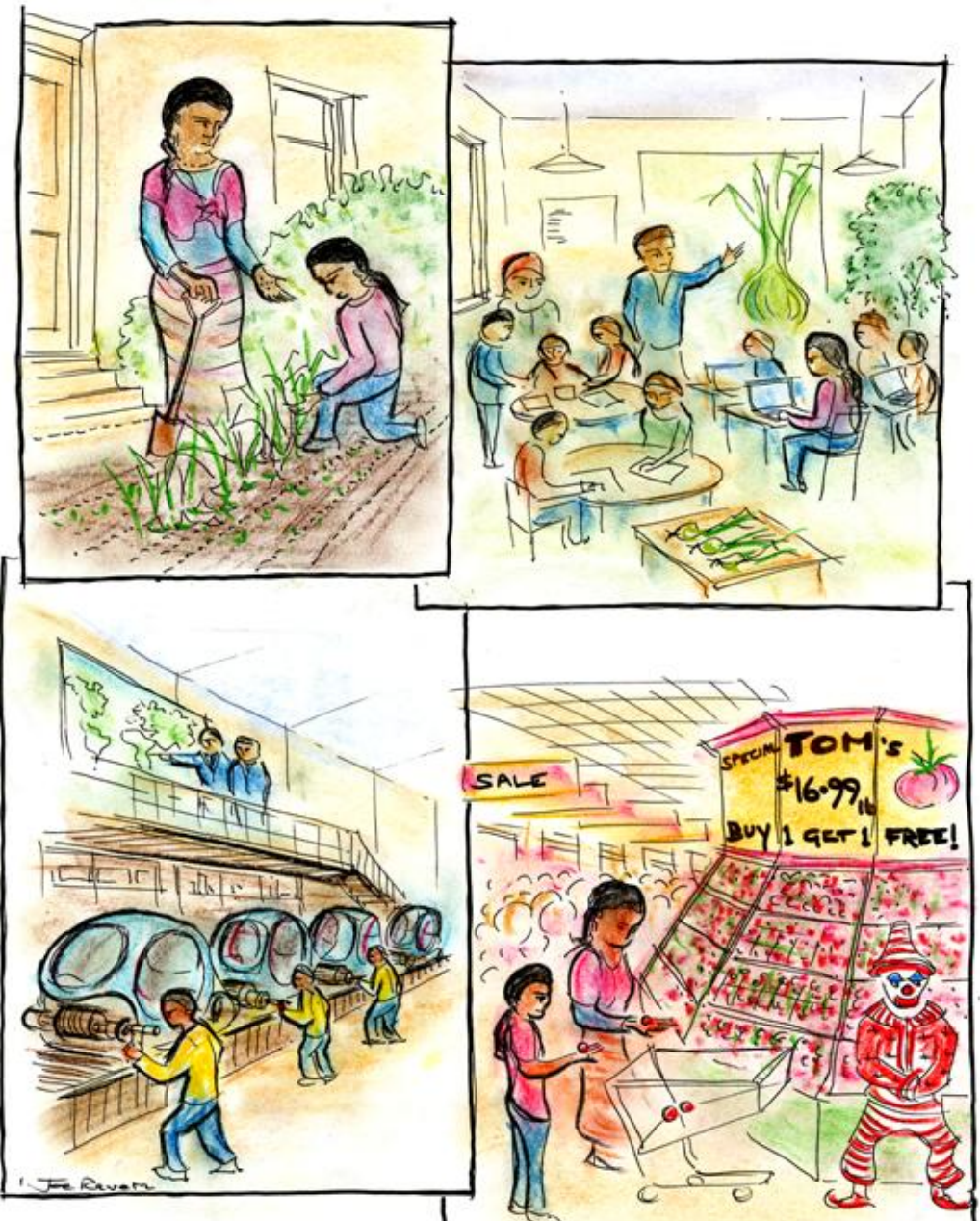
Vulnerability 2030

Scenario 1: COMEBACK?

The economy rebounds after the Great Recession. Education improves and works for most families. But automation and off-shoring prevent many jobs from ever coming back. Governments are constrained by their debts. Despite some improvements, the ranks of the vulnerable expand.

WELL-HEALTH AGENDA

Food is expensive – those that can, grow their own, others eat chemical food. Working conditions are back to the 1930s in the competition with overseas. There is new approach to health education and collaboration with others, but the hard-to-reach population grows, with conditions such as obesity, diabetes &



Scenario 2: DARK DECADES

The double-dip recession is followed by peak oil in 2016. Prices for energy and food rise rapidly while low- and middle-income jobs disappear. Government services & payments are cut severely, while vulnerability rises significantly.



WELL-HEALTH AGENDA:

As society fragments, the goal of integrated health & well-being is a distant dream for the majority. The elite enjoy the best private healthcare, which is then a branding for inner city renewal.

Others live with insecurity, unemployment and alienation



Scenario 3:

EQUITABLE ECONOMY

The Great Depression followed the Great Recession. Massive unemployment and hardship prompt a shift in values that leads to an economy that is more fair & balanced. Governments are forced to be effective and democratic.



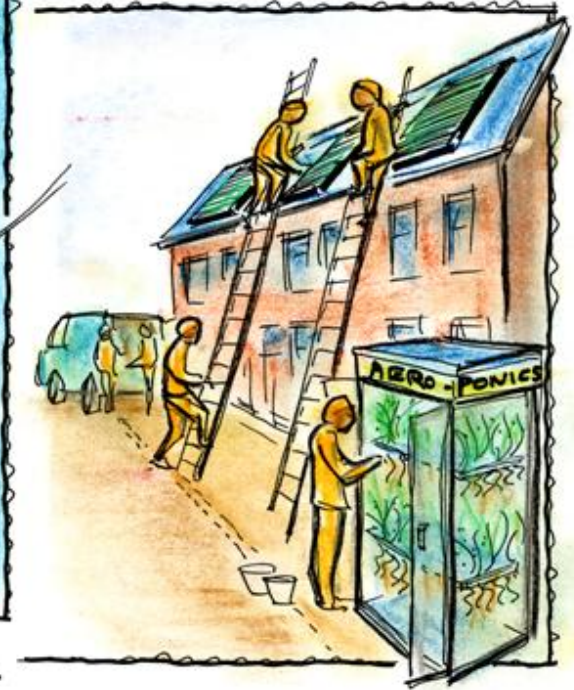
WELL-HEALTH AGENDA

The rebuilding of the community is a challenge in a fractured society with much reduced income. There are huge efforts to engage all citizens, but some remain excluded. There are new lines drawn around what is socially responsible lifestyles and healthcare on scarce resources.



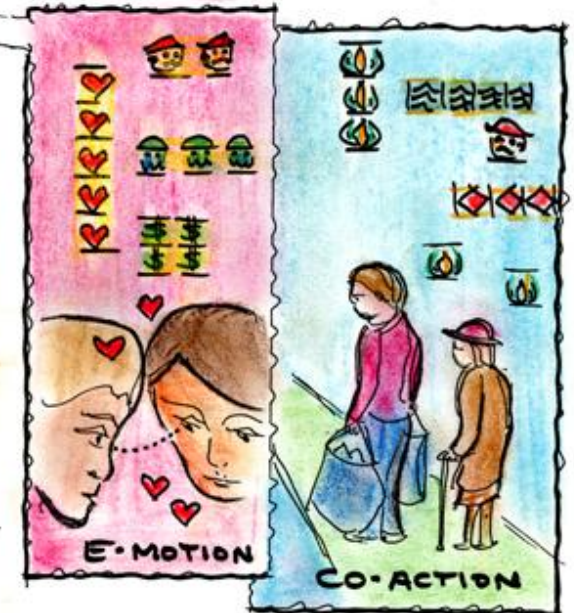
Scenario 4: CREATIVE COMMUNITIES

The economy recovers, but high debt levels limit what governments can do. So households become more self-reliant and entrepreneurial. Communities develop local currencies, barter services, and support innovation. Vulnerability is reduced.



WELL-HEALTH AGENDA

Health and well-being is a more personal and family responsibility issue, helped by social media & social technology which enables continuous feedback on activities, risks, conditions, both physical and social / cultural. There are new technologies for food growing & pollution / disease control



Wild cards

(from www.iknowfutures.eu)

Scientists up for murder as ethical issues for research are abolished

All ethical issues are removed from research and development, but there is an uprising of an opposition until there are calls for researchers to be accused of murder. As research trials on humans becomes prevalent, vulnerable sections of society (homeless, people with mental illness, 3rd world societies) are exploited and become guinea pigs for very risky research trials.



Public health and public benefit- HFA 3

Public health systems are being overtaken by individually targeted private health insurance, based on bio-geno-toxic tracing methods and intensive lifestyle management. Most EU public health systems are rapidly privatized in 2016-17, and this helps to pay for the government deficits caused by the banking crisis.



Animal Experiments End

Higher moral standards prevail and induce the end of animal experiments for pharmaceutical as well as for cosmetic products in the EU.



Trace pollutants cause 'ethnic air cleansing'

The hazard of trace pollutants in urban air are shown to affect certain ethnic minorities, e.g. Pakistani or certain EU groups, who are more susceptible to hereditary disorders such as B-thalassaemia. This leads to controversy on social norms on genetic disorders, and the disclosure of such information; ethnic tension and stress on kinship groups; and distrust of public policy and scientists.

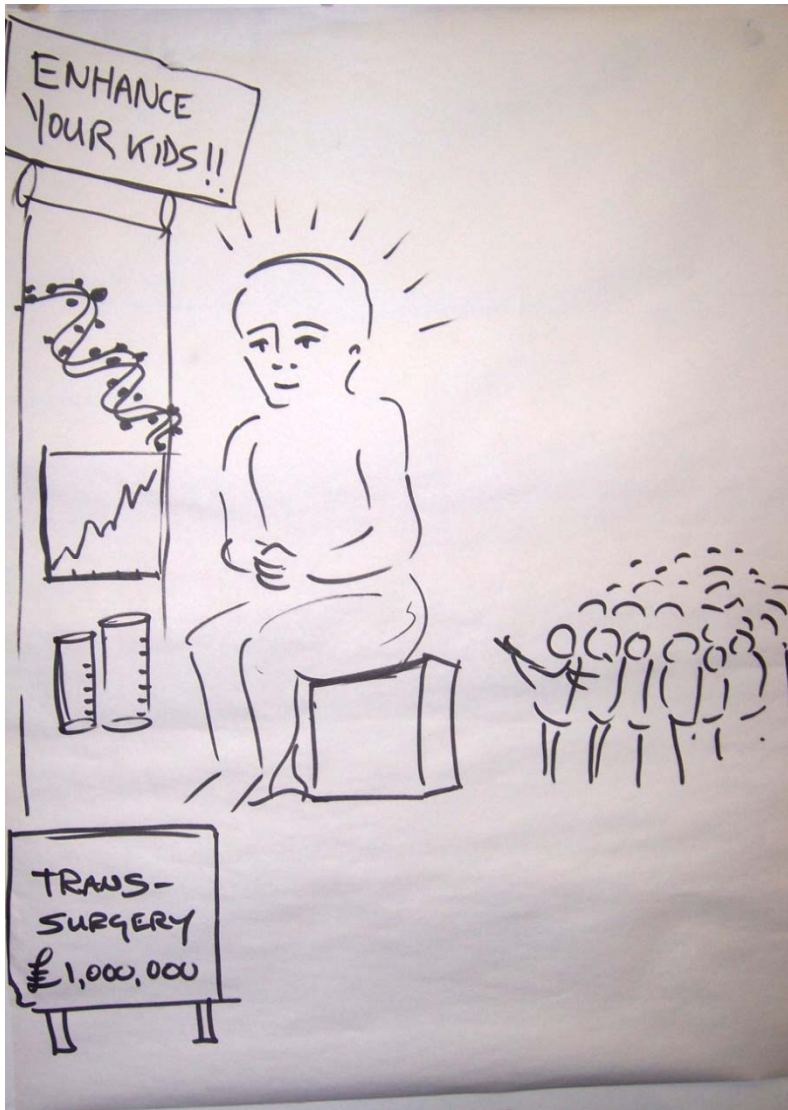


Doc-in-a-box: Pervasive self treatment and diagnosis

Nano-enabled self diagnosis and self treatment becomes pervasive. This would allow the general public to diagnose, monitor and treat illness themselves having their own 'Doc in a Box'. Doctors may become redundant and the ageing population could increase. There would also be large scale unemployment of medical professionals.



Trans-human surgery starts at £1m



'Doc-in-a-box' in every bathroom



Questions (b) – scenarios ...

- *Which are the 3 most rapid changes in your work?*
- *Which are the 3 most challenging tensions in your work?*

- Introduction
- Scoping / mapping
- Scenario / testing
- **SYNERGY / OPPORTUNITY**
- Strategy / roadmap
- What next ?



synergistic / sustainable local development

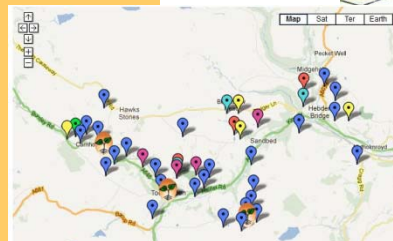
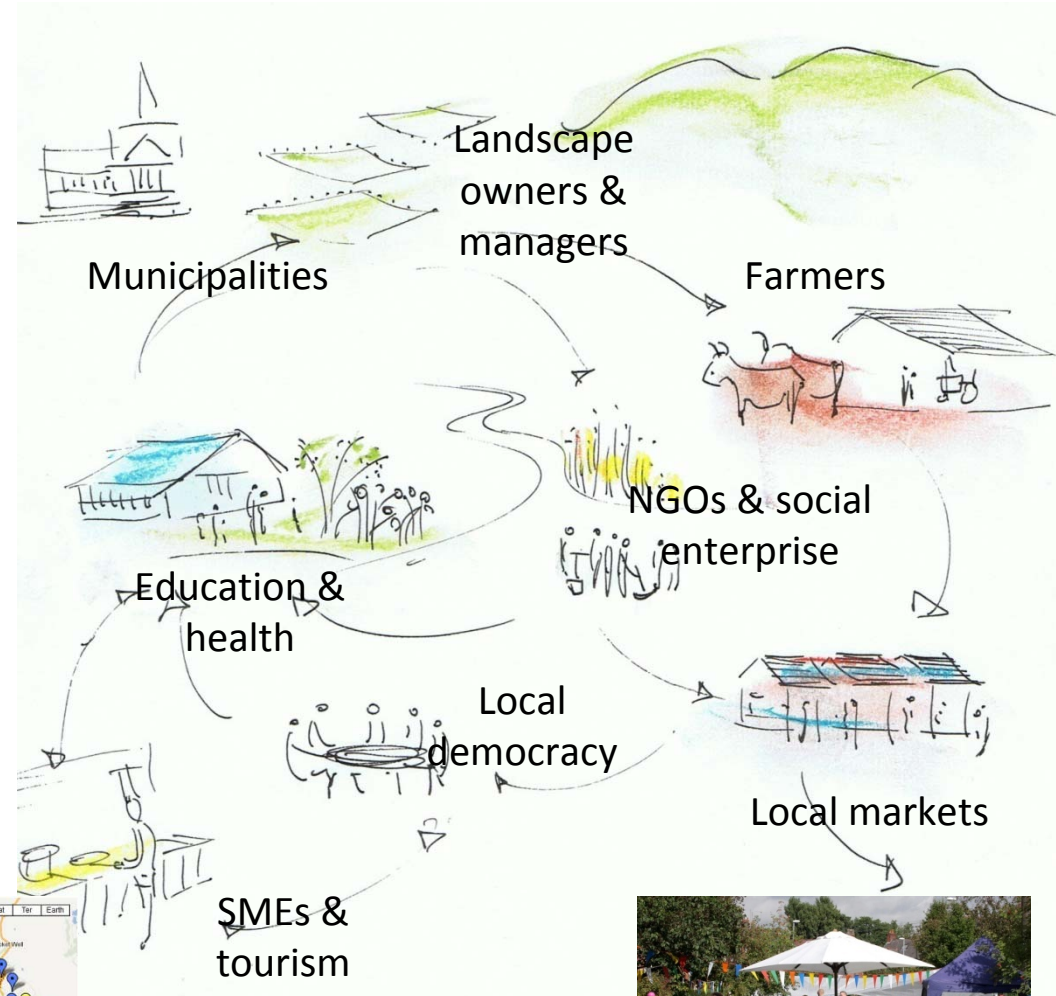
example of local food scheme at www.incredibleedibletodmorden.org.uk

factors of success:

- Nearly everyone talking & working with nearly everyone
- Space for creative action & debate
- Public / private / social / knowledge collaboration
- Social / ecological / financial investment balance
- Multi-level self-organized governance pattern
- Shared knowledge and learning networks

Implications for ICT:

- ICT can enable & facilitate, in conjunction with human...
- Combining hard & soft knowledge
- Social network relies on community of interest
- See 'egg map' >>



Synergistic emergence

- **1.0:** 'mono-functional systems' responding to direct short term change (a metaphor of a *mechanical system*).
- **2.0:** 'complex adaptive systems', responding to wider shifts and transitions (a metaphor of a *biological system*).
- **3.0:** '**Synergistic Systems**' are shaped by human qualities - thinking, learning, questioning, creativity, strategy, self-awareness, shared intelligence (a metaphor of *cognitive & personal development*).

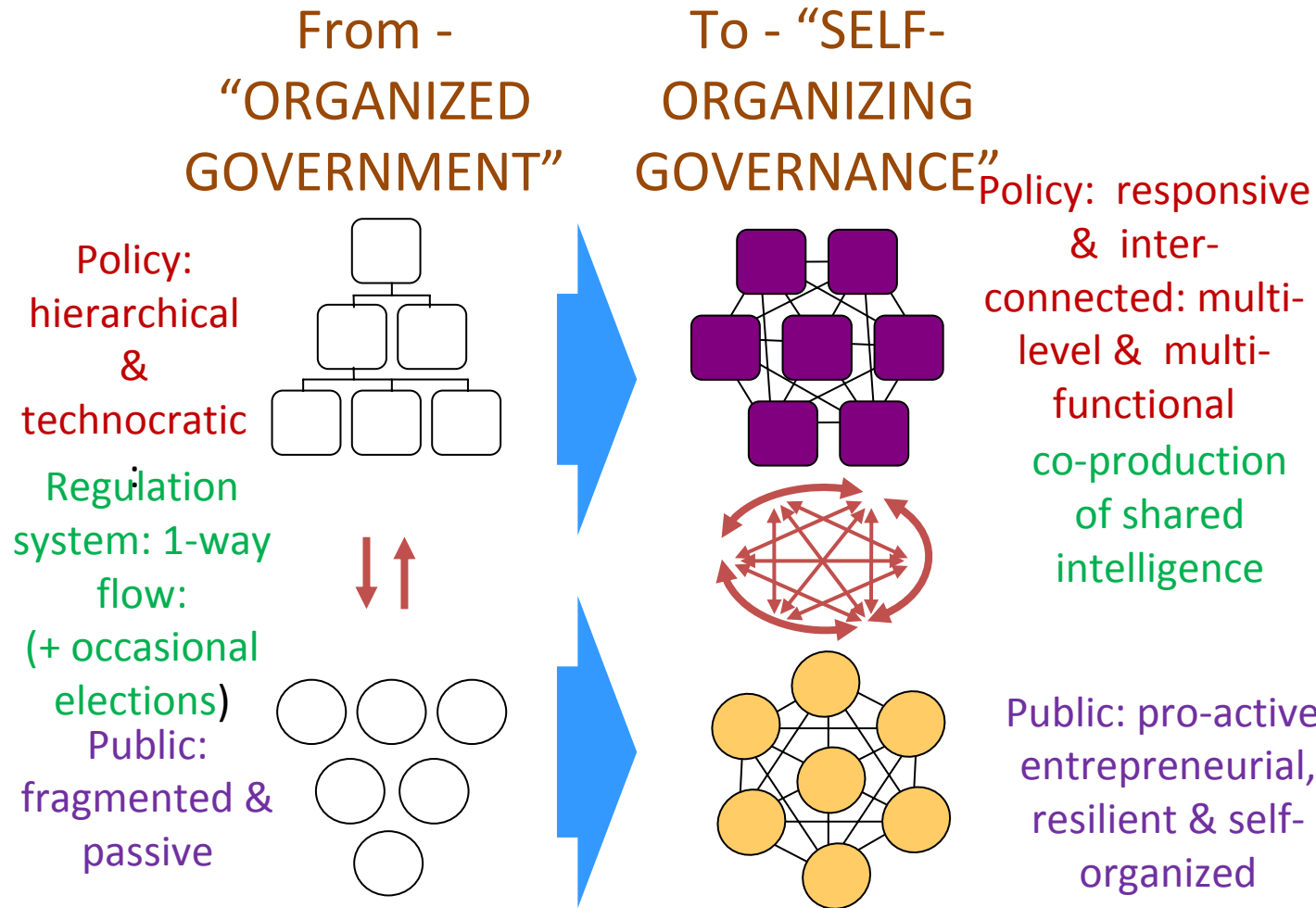
- PUBLIC HEALTH APPLICATIONS
- **1.0** – pollution, infection, malnutrition, industrial working conditions
- **2.0** – links to education, housing, environmental health policy & public services
- **3.0** – responsive, collaborative, networked, shared learning & intelligence

Synergistic co-evolution (theory)

	a) LINEAR CHANGE	b) ADAPTIVE DEVELOPMENT	c) SYNERGISTIC CO-EVOLUTION
SYSTEMS CONCEPTS	Linear systems (mechanical)	Complex adaptive, dynamic systems (biological)	Creative, cognitive, co-evolutionary systems (human)
DEVELOPMENT PROCESS	Hollowing Unemployment Alienation	Restructuring Cosmopolization Segmentation Ecology displacement	Creative learning, shared intelligence Socio-cultural inclusion Ecology internalization
THEORETICAL APPROACH	'Complicated' sets of linear variables and relationships	'Complex' sets of variables with self-organization dynamics	'Deep' complexity - intangible relationships / & ontologies

Applications: Governance & public services 3.0

- Showing a transition from 'linear' command & control government, to a more relational "governance 3.0".
- This is not new, but happens in many situations, where creative network action is required.
- Again, e.g. Urban heritage: social enterprise: ecological restoration.
- But not basic commodities & technologies.



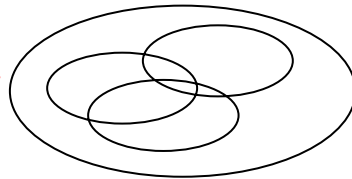
Well-health 3.0

- Transition from linear ‘winner takes all’ economy, to a more relational “economy 3.0”.
- Already seen in many situations
- But needs to re-establish & evolve new patterns to counter aggressive global forces & elite interests.
- Some successes - E.g. Urban heritage: social enterprise: ecological restoration
- Many failures....

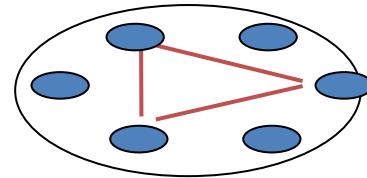
FROM -
“LINEAR
MATERIALISM”

Systemic effects – hyper wealth, destruction of ecologies & communities

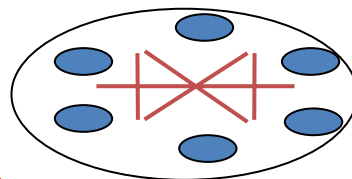
Worldviews – materialistic / individual



Economic systems – linear, monetary



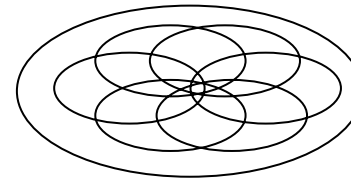
Actors – producers / consumers / investors only



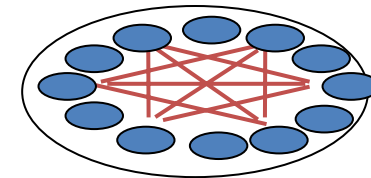
TO -
“SYNERGISTIC
PROSPERITY”

Systemic effects – relational prosperity for ecologies & communities

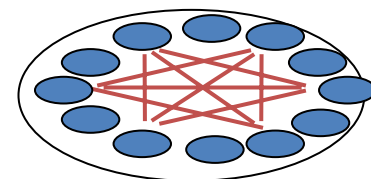
Worldviews – inclusive, multi-lateral



Healthcare systems: networked, responsive, multi-valent



All stakeholders are involved in shared values



New Directions: “Urban 3.0” Models

- ***Urban 3.0 - creative synergy, strategic thinking, self-organizing value chains, shared intelligence....***
- **Urban synergy:** creative regeneration: urban climate policy: spatial planning /building design:
- **Economic synergy:** social enterprise: stakeholder finance: value exchange: integrated development:
- **Ecological synergy:** resource management & supply chains: ecosystem value re-investment:
- **Social-cultural synergy:** community development: sustainable consumption: prosperity & well-being.
- **Governance synergy:** networked cities & regions: responsive services: digital democracy:

Synergistic interfaces in local development

Social circle

Gift economy
Barter & local exchange
Mutual aid & reciprocity
Kinship cultures

Ecological leisure & QOL
Policy regulation
Institution innovation
Spatial planning, zoning

Social business models
Ethical finance
Tax & subsidy
Proxy & shadow markets
Tokens, quotas,

Ecological planning & management
Ecological law, liability, obligations

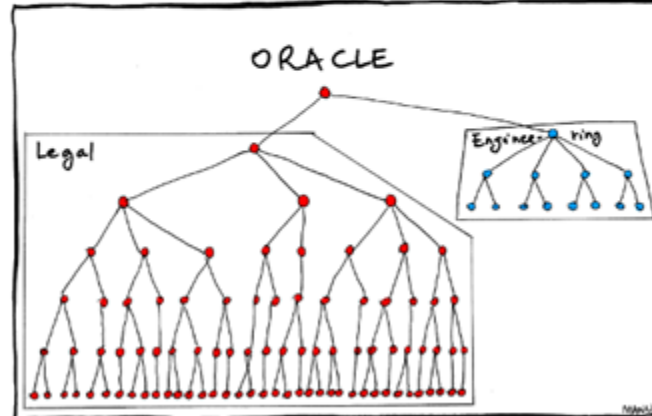
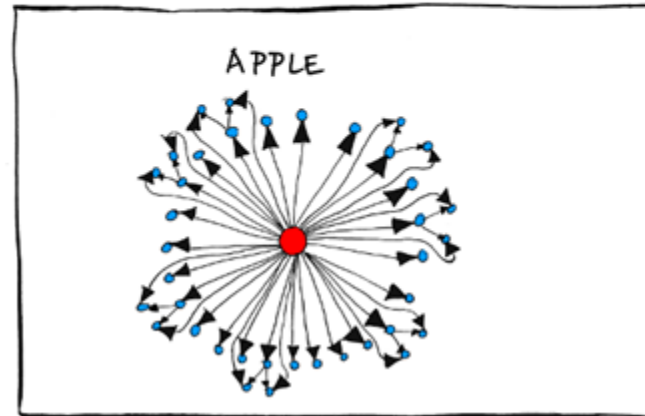
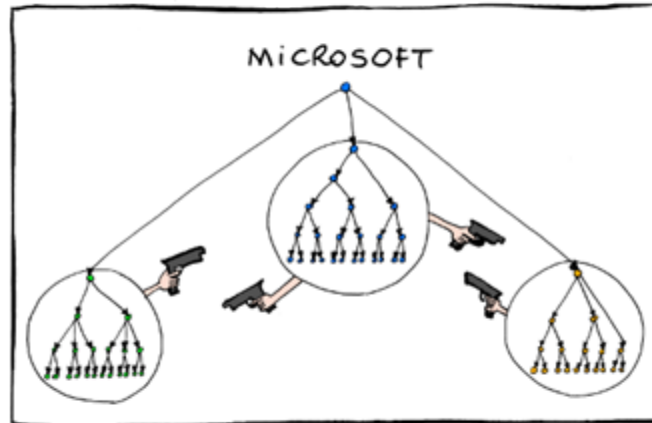
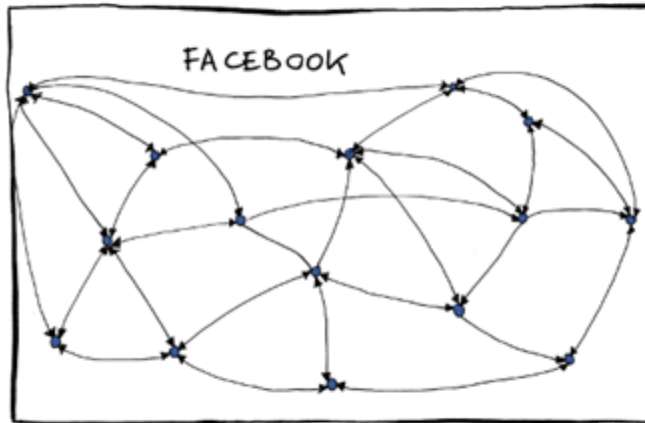
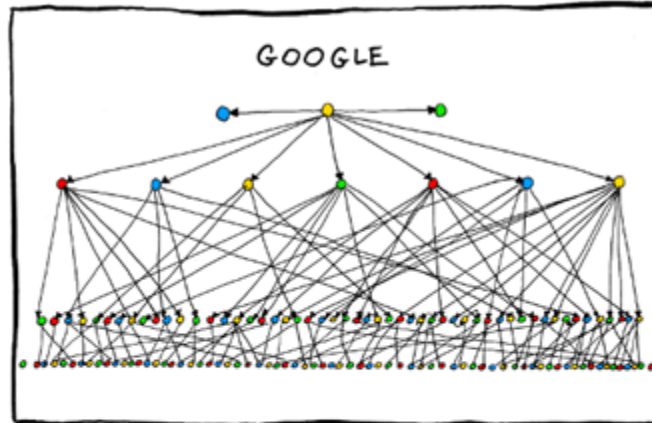
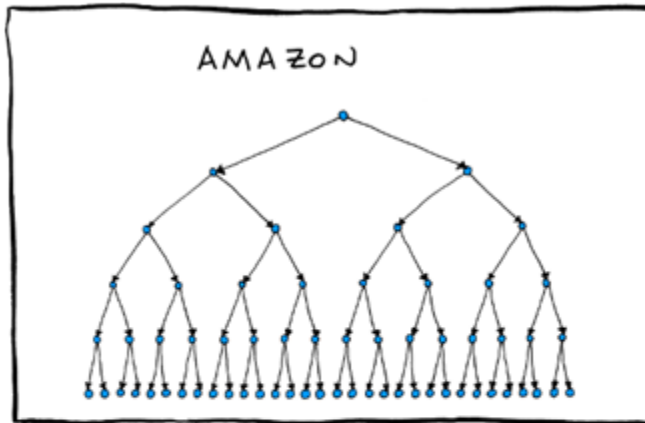
Environmental finance
Economics of Ecosystems & Biodiversity
Ecological tax & subsidy
Ecological business model

Financial innovation
New institutions
Informal economy
Alternative currencies

Ecological circle

Economic circle

Network synergistic mapping



Well-health 3.0 – cultivating synergistic intelligence

- **GOALS** - Shared intelligence – creative innovation networks: plus responsive structures & organizations
- **RESOURCES** – emerging forms of network / ‘meshwork’ governance & investment
- **PROCESSES** - Institutions, policies, programmes, to enable & promote creative innovation

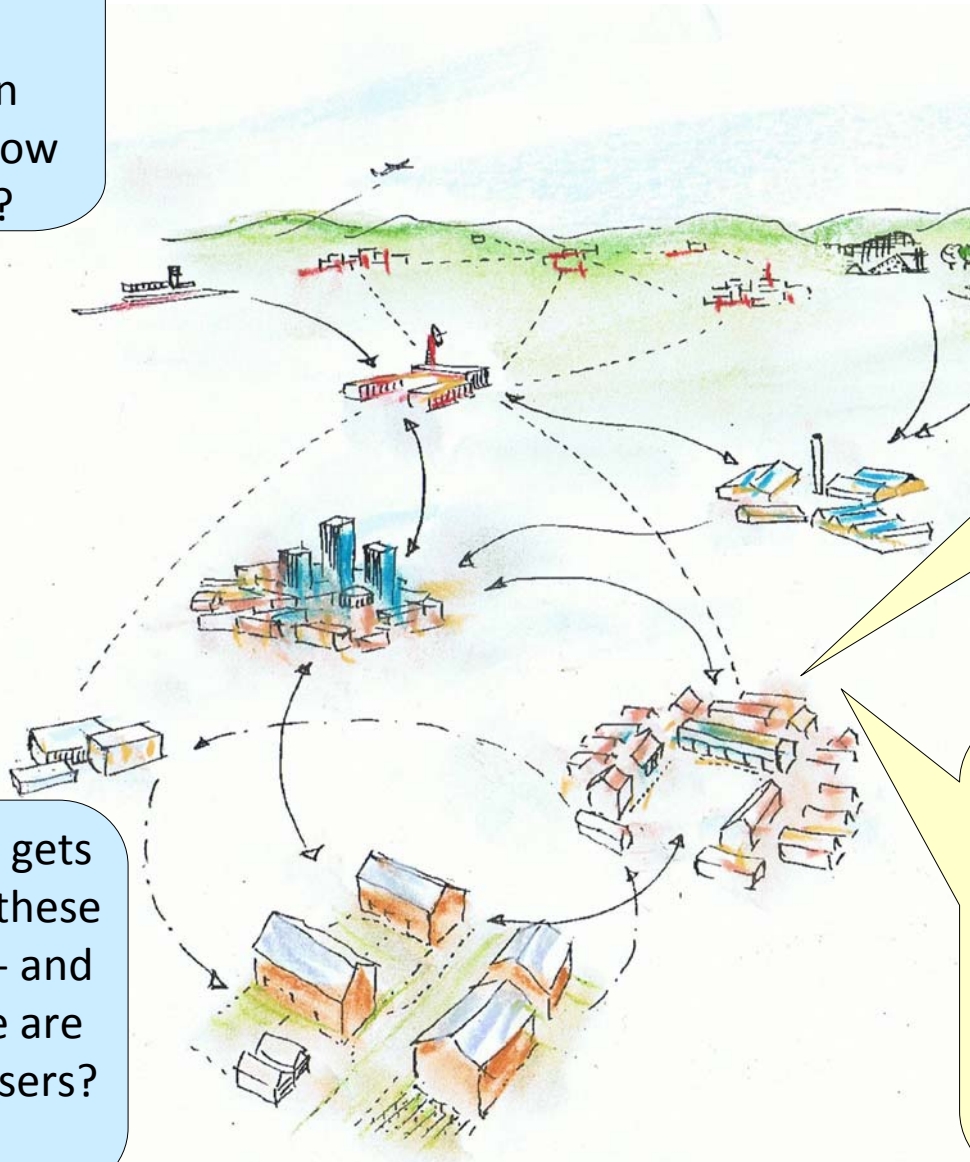
- **ENTREPRENEURIAL INTELLIGENCE:** looks for added value in social / ecological / financial innovation
- **PARTNERSHIP INTELLIGENCE :** look for opportunities in ‘communities of interest’ - organizations & networks
- **COGNITIVE INTELLIGENCE:** enhance functional information & learning for shared tasks: (ICT /social tech can help....)

Well-health 3.0 model

Wow - so this is well-health intelligence in action !! .. So how does it work?



Ok but - who gets to decide on these connections - and what if there are winners or losers?



Basically it's about connections. We connect between different parts of the socio-cultural cycle. Then we connect these with layers of the economic & governance system.

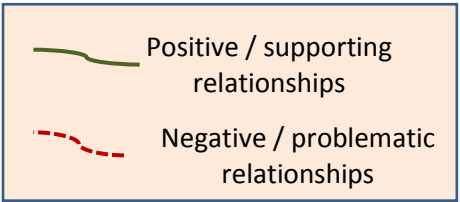
The community decides, in a deliberative synergy foresight network So we can begin to reduce gaps of wealth and poverty, fragmentation of psyche so that positive health can flourish.

Questions (c) - synergy

- *Which 3 'synergies' / creative opportunities, could take shape in your domain?*
- *Which 3 'synergies' / creative opportunities, could make positive links with other domains?*

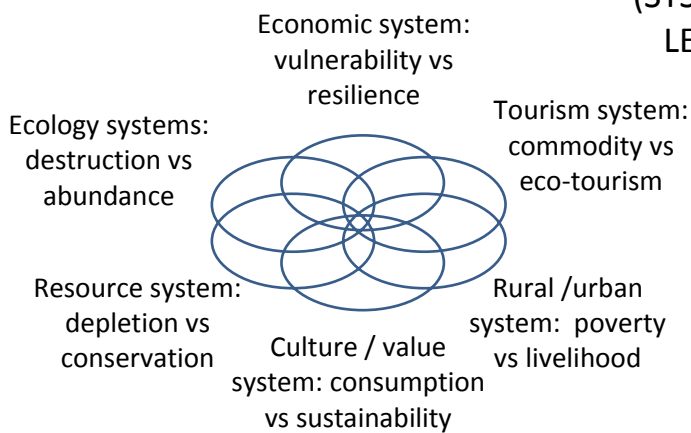
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- **STRATEGY / ROADMAP**
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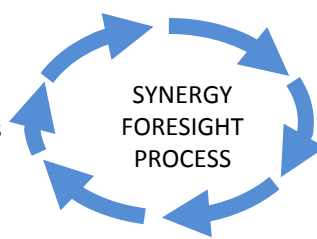
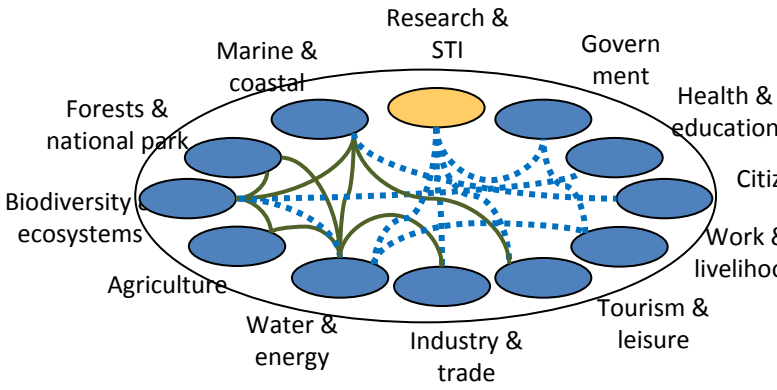
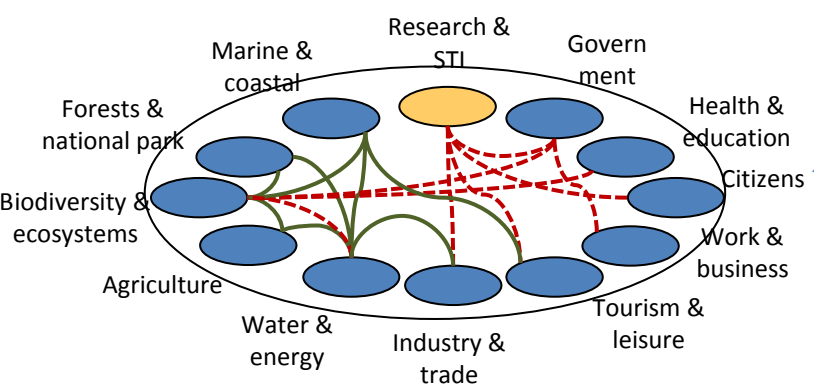
Scenario mode:
(divergent thinking)

(SYSTEMIC LEVEL)



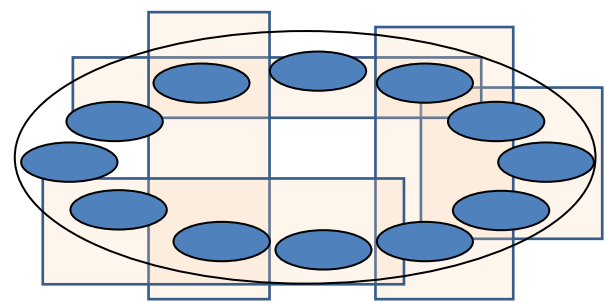
AGENT LEVEL

AGENT LEVEL



Scoping & mapping

**Emergent thinking:
Potential synergies**

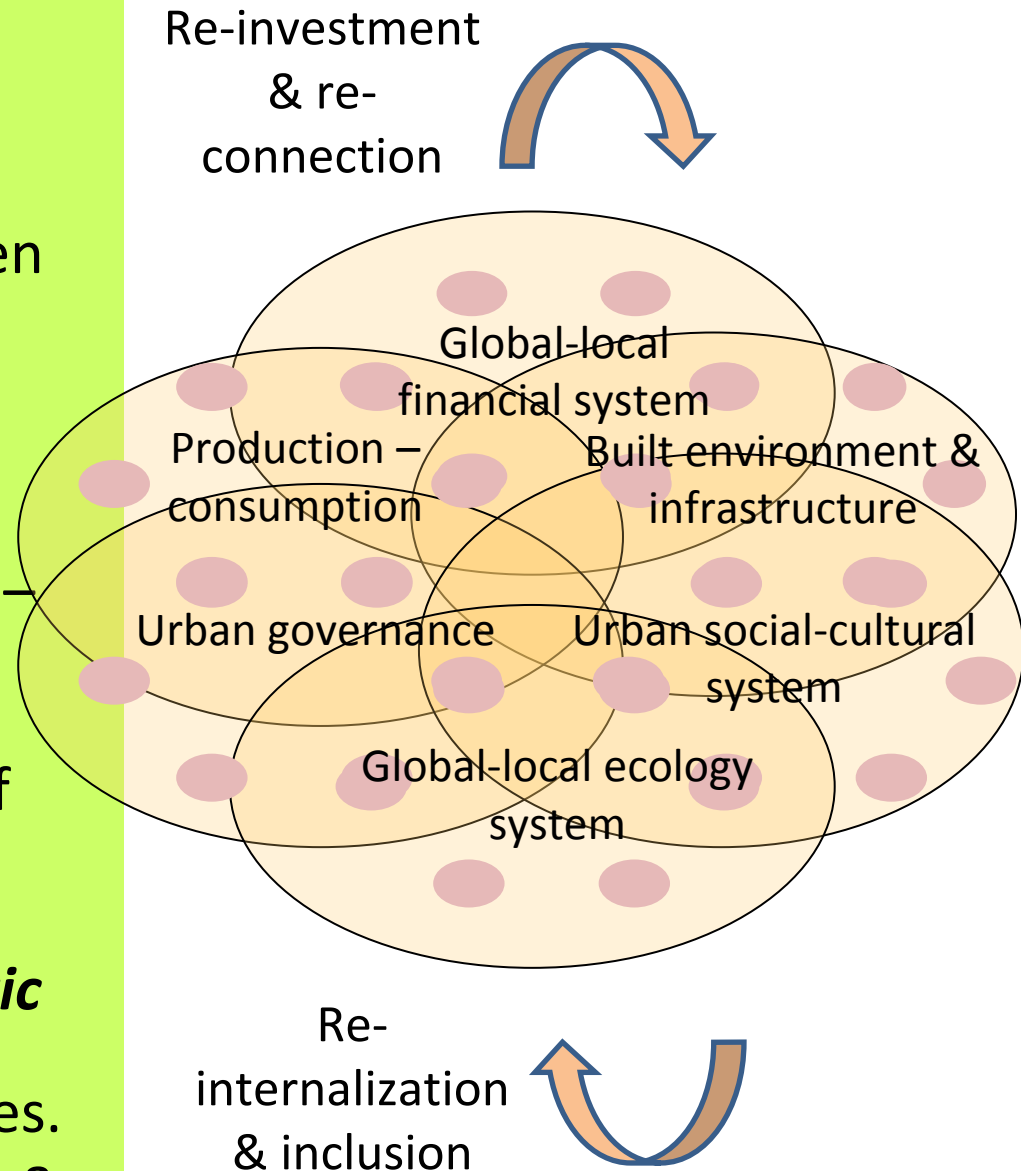


Convergence & application >>

AGENT LEVEL

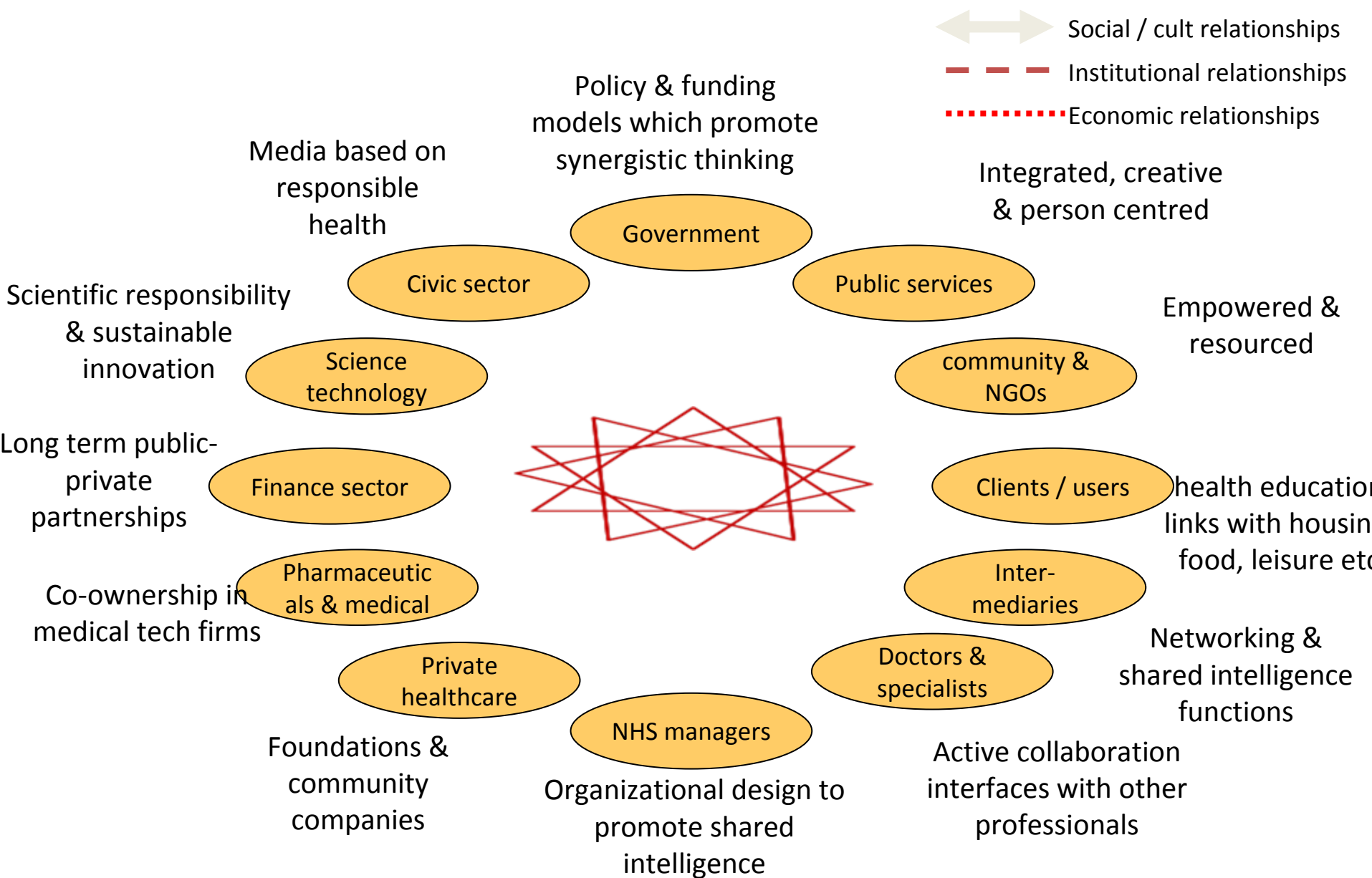
Multiple Systems - Pathways

- So – how to use this for practical policy & action??
- Explore process of creative synergy in each circle
- Focus on the interfaces between circles –
- These can be dis-junctions / conflicts - or - new creative potential / opportunities
- Focus on the ‘systemic effects’ – dependency, hierarchy, expropriation, etc
- **Synergistics** is the process of inter-connecting between different systems & synergies
- This helps to develop **synergistic pathways** – combined & coordinated actions & responses.
- these then translate into policy &



Example: healthy city synergistic mapping

Adapted from: Integrated Visions project 2001:

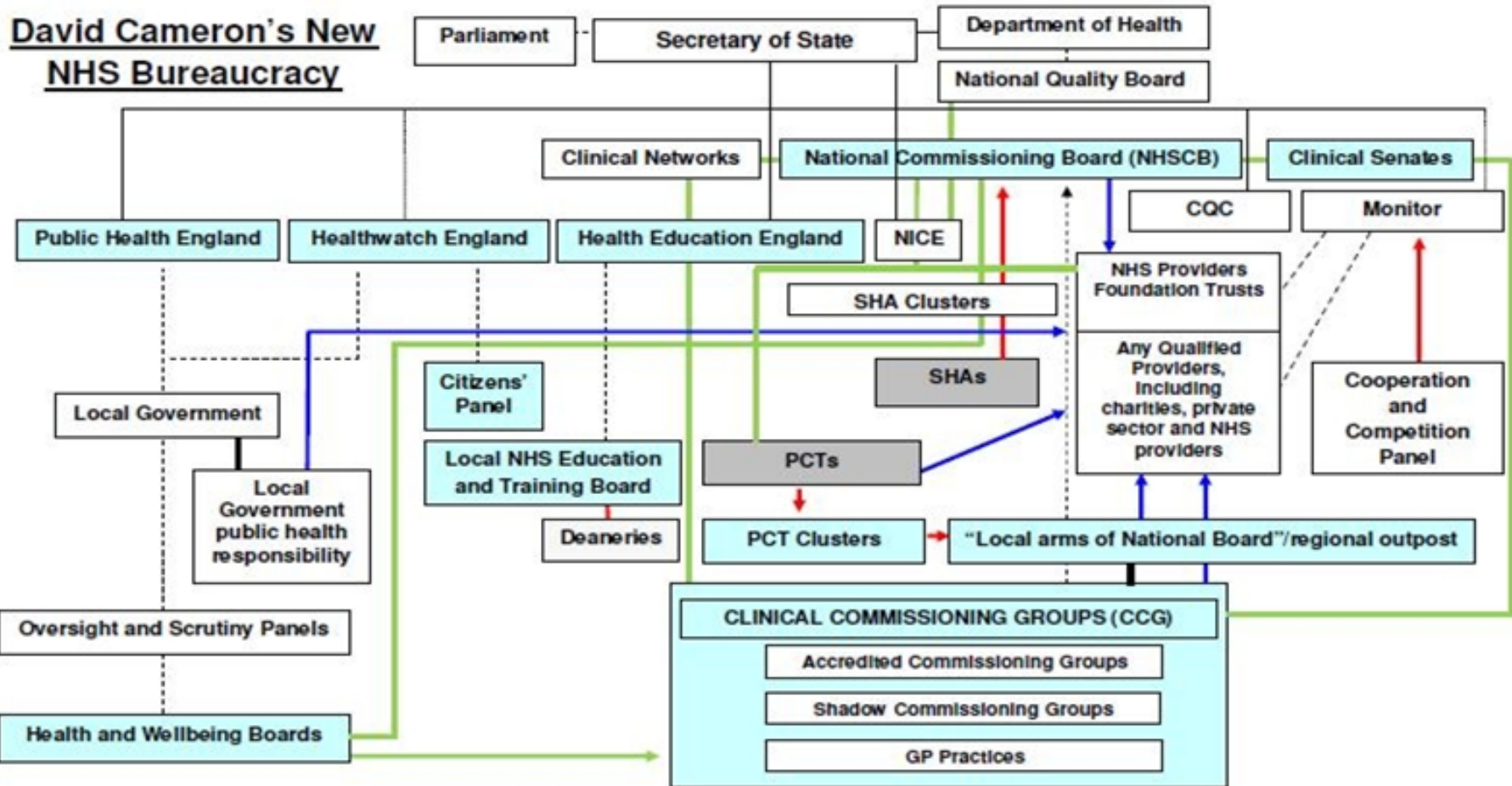


Synergistic design

- 1 debate - State vs Market....
- another divide could be more useful – between ‘efficiency’ of 1.0 type organizations, and the ‘synergicity’ of 3.0 type organizations.
- Such qualities show up already in many places:
 - where nursing depends on human empathy:
 - where patients use Facebook to self-organize: or
 - where local shopkeepers keep an eye out for local youth.....
- then - how to design organizations and incentives and investments, whether public or private, with synergistic qualities,
- This would be multi-level all the way up the tree to national level or beyond.
- Needs rapid shared learning on
 - User pathways
 - Professional mandates
 - Organization boundaries
 - Organization interfaces
 - New forms of investment & reward

Is this the future??

David Cameron's New NHS Bureaucracy



KEY

Line of accountability

Consult/issue guidance etc

Merge

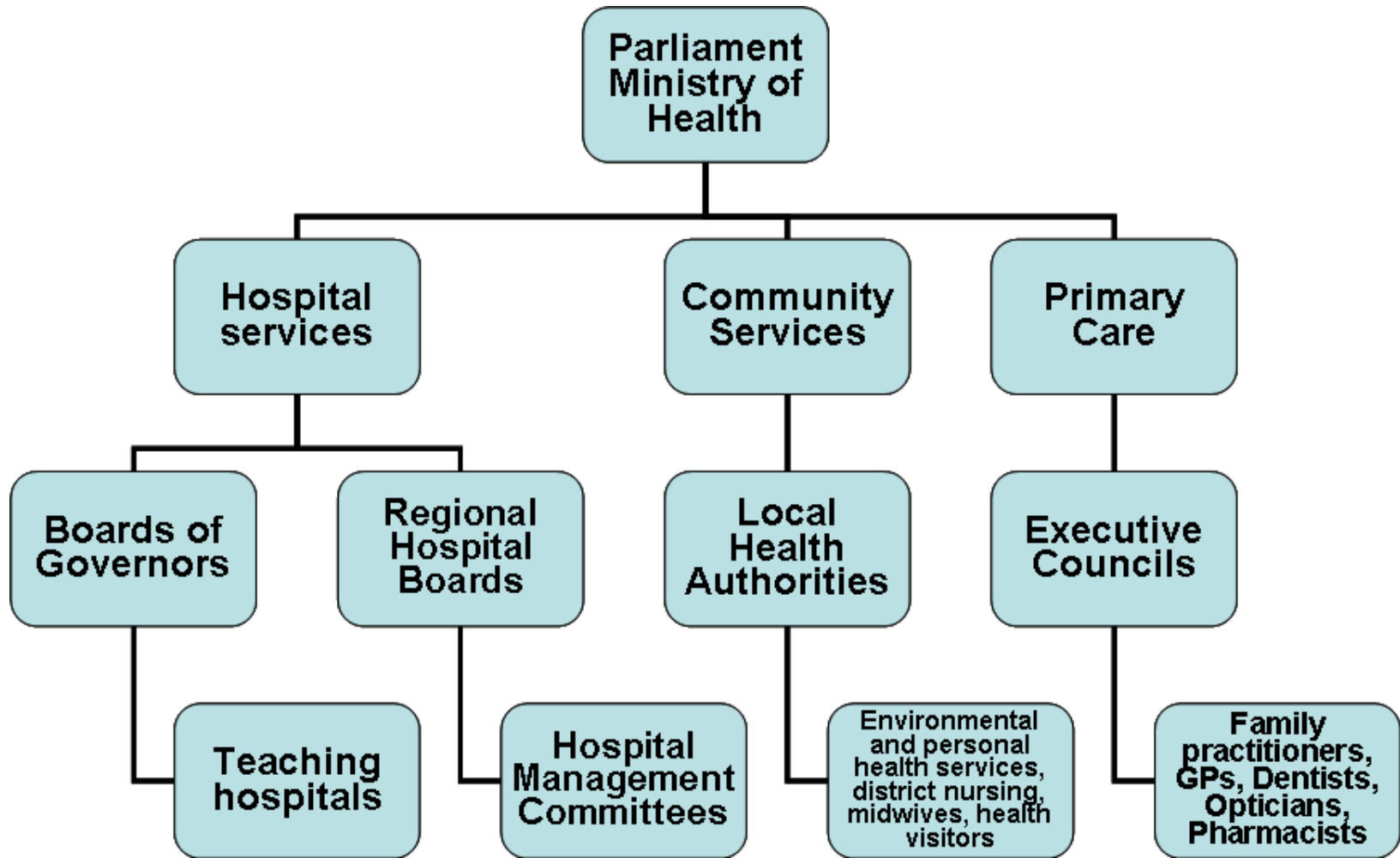
New Body

Existing organisation (retained until April 2013)

Commission services from



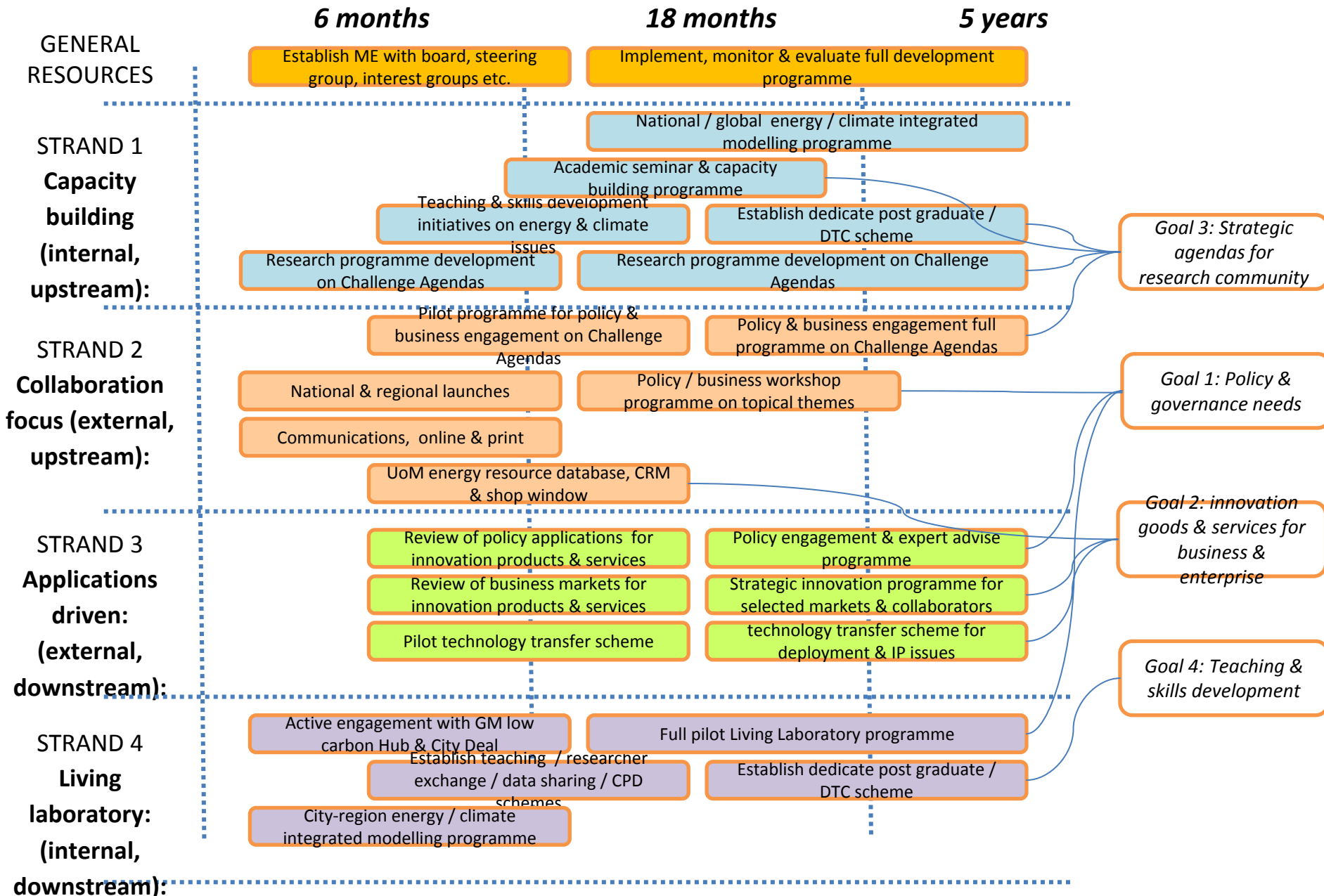
Or this...



Synergistic design opportunities

- some very interesting directions:
 - a) professions with the remit to 'follow the humans' across the system:
 - b) organizations which are more like rhizomatic networks:
 - c) financial value flows which follow social / ecological value flows...
- Knowledge pathways which include users / providers / infrastructure. Such knowledge can be:
 - co-produced & networked via social tech:
 - multi-valent with different channels:
 - Linking professional with user experience

Example: synergistic research road-mapping



Policy design evaluation criteria

	RELATIONAL FOCUS	EMERGENT FOCUS
<i>Meanings, values, worldviews</i>	1) Multiple value sets & priorities	2) Synergistic & collaborative value creation
<i>Knowledge, learning, intelligence</i>	3) Relational shared social knowledge	4) Synergistic learning & shared intelligence
<i>Actions, plans, effects</i>	5) Multiple collaborative chains & loops	6) Synergistic creative self-organization & innovation
<i>Resources, materials, capitals</i>	7) Multiple collaborative socio-economic-cultural resources / capitals	8) Synergistic resources which emerge by co-evolution
<i>Systems, boundaries</i>	9) Limits to extraction / expropriation / externalization	10) Synergistic re-investment & re-socialization & internalization

Questions (d) - strategy

- *Which 3 'synergies' / collaborative opportunities could be put into practice within your work?*
- *Which 3 'synergies' / collaborative opportunities could be linked with other domains?*
- *Also ... which of the above are next / soon / later??*

- Introduction
- Scoping / mapping
- Scenario / testing
- Synergy / opportunity
- Strategy / roadmap
- **WHAT NEXT ?**



